

NETWORKWORLD

Maximize your return on IT ■ www.networkworld.com

September 29, 2008 ■ Volume 25, Number 38

Enterasys CEO dies suddenly

25-year industry veteran Mike Fabiaschi remembered as champion for customers. **Page 8.**



Four steps to take control of your mobile devices

Securing and managing every device and connection, educating users is key. **Page 11.**

Will Android battle the iPhone for corporate users?

While T-Mobile's Android-powered G1 phone is intended to take on Apple's iPhone, it has a long way to go before it can be considered an enterprise device. **Page 17.**

Fighting terrorists with biometrics

Biometrics has become a favored security technology of the federal government, which is using it in Iraq to identify bomb makers. **Page 21.**

Microsoft muscling up Windows

High-performance computing server faces established challengers

BY JOHN FONTANA

Microsoft has built a strategy around the planned early-November release of its high-performance computing server that it hopes will be the catalyst to deliver massive computing power for future applications.

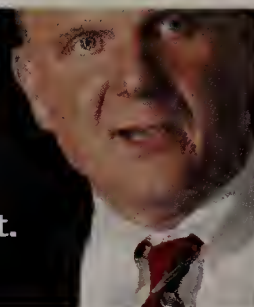
Microsoft will apply its strategy of "simplifying computing" to the costly and often complex high-performance computing world. In this case it is featuring its Windows HPC Server 2008 surrounded by Microsoft's collection of applications, management wares, development tools and independent software vendor community.

"We are not talking about a lot of unique product development here; it is mostly about packaging and coming up with appropriate licensing," says Gordon Haff, an analyst with Illuminata. "But as HPC becomes more and more

More on Microsoft

Ballmer still searching for an answer to Google. **Page 12.**

Windows 7: Seven developments you should know about. **Page 15**



mainstream and used for all kinds of commercial roles, whether it is product design or business analytics, Windows is not such an unnatural fit as it might have been in the past."

Microsoft last week said it would release on Nov. 1 HPC Server 2008, the company's **See Microsoft, page 16**

Unified threat management catching on

BY TIM GREENE

Customers using unified threat management devices say the appliances represent a more streamlined way to provide multiple security functions and track down security data, but they don't adequately meet all gateway security needs.

This category of equipment is about 4 years old and is growing fast — IDC projects more than \$3 billion in sales in 2011. UTMs offer a way to simplify networks by eliminating boxes.

For instance, the Columbia Association, a nonprofit government agency that oversees the planned city of Columbia, Md., switched this year to using Cisco ASA routers with UTM features

that enabled the association to drop a VPN concentrator, firewall and intrusion-detection system — all Cisco gear, as well as the Cisco Security Agent software deployed on the association's servers.

Instead, the ASA performs all those functions, says Nagaraj Reddi, the association's IT director. Adopting the ASA to pick up the functions of the individ-

ual products gave him a way to assess quickly what otherwise would have been spread across four other platforms. "We had nothing to put these logs together," he says. "Now we can monitor them all in one place."

This kind of unified reporting from UTMs can give a broad view of overall network health and activity, says Grant

See UTM, page 36

UTMs are not for everybody

Unified threat management platforms bring together multiple security functions on a single piece of hardware, but they aren't always the perfect solution.

Pros	Cons
A single device streamlines network architecture.	Individual applications may not have all the features of stand-alone appliances.
Integrated security functions make for simpler administration.	Redundant boxes are needed to avoid single points of failure.
Unified reporting gives a more complete picture of network and security status.	Shared CPU may force upgrading to larger boxes or offloading individual apps to separate appliances to avoid performance drops.
IT staff has less equipment to learn about.	Platforms may not support all the apps needed.

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WHAT DO YOU HAVE TO SAY?



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NETWORK INFRASTRUCTURE

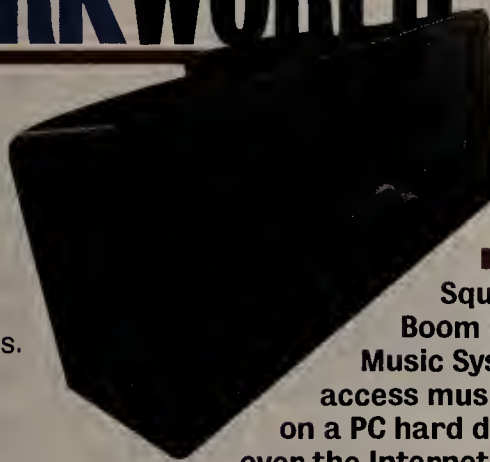
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COOL TOOLS

■ **Logitech's Squeezebox Boom Network Music System** can access music stored on a PC hard drive or over the Internet. See Cool Tools, page 26.

SERVICE PROVIDERS

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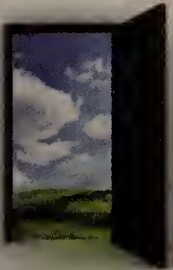
VMware's ESX KOs Microsoft's Hyper-V in virtualization face-off

VMware's maturity gives it the edge in manageability, stability. After two months of rigorous testing of both performance and feature sets, veteran VMware gets the nod over newcomer Hyper-V. Page 28. For results of performance test, go to www.networkworld.com/6721.

GOODBADUGLY

Google wants you to change the world

Google changed the world with a simple idea, and now is offering \$10 million to help anyone who can do the same. A new Google project encourages people to submit ideas for changing the world, then vote on the ones with the potential to help the most people. It's been named Project 10100 (pronounced "Project 10 to the 100th"), after the numeric value of a "googol."



When "OK" isn't

Psychologists at North Carolina State University found that computer users have a hard time distinguishing between fake Windows warning messages and real ones. An experiment testing the responses of 42 students browsing the Web found that 63% would click "OK" whenever they saw a popup warning, whether or not it was fake.

ISP has off and on week

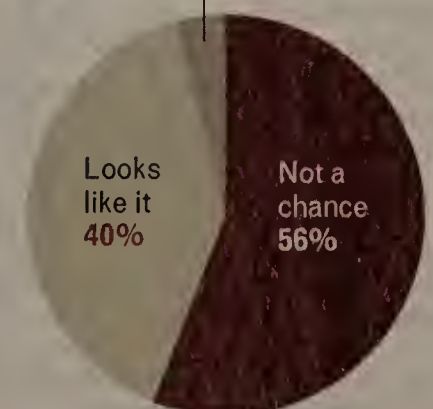
Pressure from computer security researchers may have knocked ISP Intercage offline, but not for long. The company, accused of being a haven to online criminals, got itself back online last week just days after its last upstream network provider, Pacific Internet Exchange, dropped it as a customer. Intercage president Emil Kacperski said Pacific did not tell him why his company had been knocked offline, but he believes it was in response to pressure from Spamhaus, a volunteer-run antispam group.

POLL

A snapshot of how networkworld.com visitors voted on a key networking issue last week:

Will Hyper-V kill off VMware like IE killed Netscape?

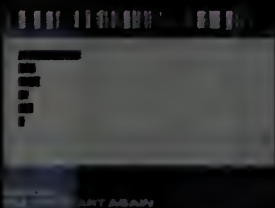
What's Netscape? 4%



Total voters for this poll: 159

Vote and discuss: www.nwdocfinder.com/6849

SECURITY TREND WATCH



A special editorial issue examining how information protection, identity-centric access control, security event management and managed security services are shaping new enterprise defenses. www.nwdocfinder.com/6850

Why we haven't moved to Vista

Re: Vista: IT loves it, hates it (www.nwdocfinder.com/6825):

I am the IT manager of a company that has about 1250 seats spread out across five states, and we have a combination of Windows 2000 and XP on the desktop. We have stayed away from Vista because of the hardware requirements. We tend to hold on to desktops for about five years or more, and most of our hardware is not capable of running Vista. Most of our desktops only have 512MB of memory in them and 2.0GB Celeron processors, and they do not have Accelerated Graphics Port cards for the video. The upgrade cost for us would be enormous. So, that is the first reason we have not taken the path to Vista.

The second reason is that some of the third-party software we run does not support Vista.

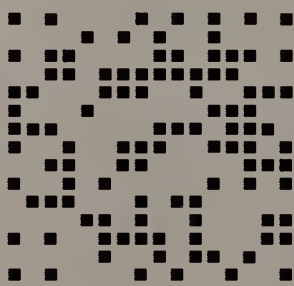
The third and probably most important issue is that there is no business reason to upgrade. Most of our users are doing terminal emulation, word processing, spreadsheets and presentations, and that does not take a supercomputer to run on or a pretty front end. There is not a business need for us to have pretty, gee-whiz graphics to run these applications. We usually do not adopt a new operating system until at least the first Service Pack has been released. But in this case there is no driving business need to go to Vista. We do not have this problem on the systems that we run: i5 (AS/400), AIX or Linux. I have been in the IT business for 35 years, and it takes a lot less money and staff to support the other hardware and operating systems than it does my Windows environment.

Alan Clark

Discuss at www.nwdocfinder.com/6826

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For more information on code scanning see www.nww.com/codescan

Holding project managers accountable

Re: An objective way to evaluate project managers (www.nwdocfinder.com/6827):

When things are subjective, it is far too easy for them to get swept under the rug and for small problems to turn into major issues before they are found.

We use earned-value management on my project, and although there is some overhead, it helps to hold company project managers accountable.

Even when metrics are in place, you have

to watch out for sponsors that are too forgiving and accept excuses. Life happens, but far too many project managers get into the habit of not truly owning their projects because they can blame failure on something or someone else.

Josh Nankivel

Discuss at www.nwdocfinder.com/6828

Not the right medium for private e-mail

Re: Palin's private e-mail hacked, posted to 'Net (www.nwdocfinder.com/6829):

"Free" e-mail services such as Yahoo and Gmail are inherently insecure. When you are using such services, assume that everything you type is being sent to the entire world.

Steve Crye

Discuss at www.nwdocfinder.com/6830

Who cares if Google calls them beta?

Re: Almost half of Google products — including 4-year-old Gmail — remain in beta: Why? (www.nwdocfinder.com/6851):

Beta tag or no beta tag, what matters is the actual quality of a product. As far as I have seen, Google's products are at least as stable as many others.

As long as software can't be guaranteed to be bug-free, which holds for all on- or offline consumer software available, it should be labeled beta. Then we will finally have stopped fooling each other.

Neither Google nor any other company has the luxury not to take responsibility for their products. This has nothing to do with a beta tag, and everything with market.

Mattijs Kneppers

Discuss at www.nwdocfinder.com/6851

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BLOGOSPHERE

■ **T-Mobile worries G3 network not up to snuff for Android.** Mitchell Ashley writes in his *Converging on Microsoft* blog: "T-Mobile reversed a decision about the Google Android G1 phone this week. One of the under-reported aspects of the Google Android G1 phone was that T-Mobile would throttle data rates for users who exceeded 1GB per month. Excuse me? Now there's a dumb decision, and it looks like T-Mobile has realized the errors of their ways, backing off that decision. So, you have to ask why T-Mobile made such a decision in the first place. Two likely possibilities jump to mind: T-Mobile anticipated it might be overwhelmed with customers buying and using the G1 Android phones to surf the Internet, trying out and showing off their new smartphone doodad; or T-Mobile has genuine concerns about the capacity or resilience of its new G3 network." www.nwdocfinder.com/6844

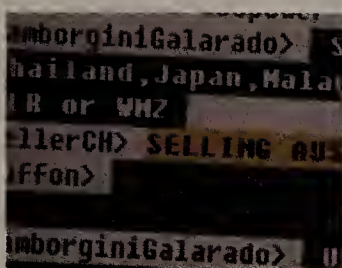
■ **Gartner advises Cisco customers to proceed with caution with the company's WAAS wares.** Larry Chaffin writes in his *Putting Realism Into Your Network* blog: "Gartner tells us all what we already knew about the Cisco [Wide Area Application Services], it is immature. . . . Gartner put this paper together after getting feedback from Cisco WAAS customers, so this is not a competitive company making these claims. Gartner said problems with software quality and stability issues should make customers wary and that the product is still immature compared with its competitors. It reported that customers say Cisco WAAS does not meet Cisco's standards and it has taken some customers six months or more to resolve significant bugs." www.nwdocfinder.com/6845

■ **Internet users easily fooled by bogus popups, study finds.** The Alpha Doggs blog reports: "Most Internet users can't tell the difference between legitimate popup warnings on their computer screens and fake ones designed to trick people into downloading malware, according to a new North Carolina State University study. And that's even when warned not to click on suspicious-looking popups. 'This study demonstrates how easy it is to fool people on the Web,' said study co-author Michael Wogalter, professor of psychology at NC State, in a statement. Then again, he said he wasn't really sure how credible companies could come up with warnings that couldn't be duplicated by malware purveyors." www.nwdocfinder.com/6847

INTERVIEWS, THE COOLEST TOOLS AND MORE

ITv VIDEO

SECURITY VIDEO:



Touring the hacker underground

Jason Meserve dives into the secret chat rooms used by thieves to trade credit-card and other stolen personal information.

www.nwdocfinder.com/6838

IDG NEWS WIRE:

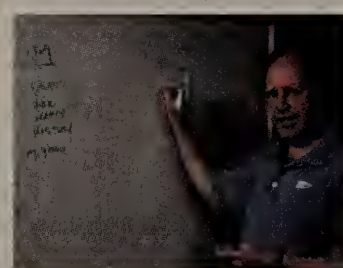


T-Mobile launches G1 Android phone

Google's open source mobile Android software makes its debut on the HTC G1 phone, which will run on T-Mobile's 3G network.

www.nwdocfinder.com/6839

TECH UPDATE 2.0:



Sharing knowledge in a Web 2.0 world

Learn how enterprises can tie together blogs, RSS feeds, e-mail, intranets and other Web 2.0 assets for sharing corporate knowledge.

www.nwdocfinder.com/6840

BEST OF NWW'S NEWSLETTERS

Hurricane Ike and the electronic divide

Tech exec: Covering an area of 640 square miles, Houston is home to more than 2 million people — almost 4 million if you count the full metropolitan area. The center of Houston is only about 50 miles from the Gulf Coast. Normally we Houstonians like our proximity to the sea: Galveston Island and other nearby beach towns are our playground throughout the year. Just four days ago, however, Hurricane Ike changed all that. Making landfall on the eastern end of Galveston, Ike raced across the narrow island and into Galveston Bay, then up the Houston Ship Channel and straight into the annals of history. On his way to becoming one of this country's most costly natural disasters, Ike struck a terrible blow to Houston and many surrounding communities. This article isn't about the real human suffering of those who were killed or injured, or who lost their homes or livelihood. I couldn't begin to cover that tragic news. My story is about something much more familiar to *Network World* readers: the disruption to our electronic lives. For years we have been hearing about the digital divide — the chasm created when one portion of the world's population has full access to the broad range of knowledge posted to

the Internet and the rest of the population does not. This week, courtesy of Hurricane Ike, I am learning about another kind of divide. Call it the electronic divide, if you like. It's the difference between having and not having access to the utilities we all take for granted: electricity, phone and even Internet. It also emphasizes the manmade weaknesses we create when we are too dependent on technology. www.nwdocfinder.com/6833

Messaging: In 2004, Jeremy Jaynes was sentenced to nine years in prison for violating Virginia's fairly restrictive antispam law. Earlier this year, he appealed to Virginia's Supreme Court, and his conviction was upheld. He appealed again, and the week before last, his conviction was overturned. The court ruled that the Virginia law was too broad because it did not provide an exemption for religious and political spam messages. The court, in rendering its decision, agreed that spammers have the right to express their political or religious beliefs even if they forge their identity. I believe that the Virginia ruling will have significant long-term impacts on users of messaging and unified communications. www.nwdocfinder.com/6834

CUSTOMER CARE THAT SUITS YOUR BUSINESS

Years of experience enables Sprint customer care representatives to consistently provide solutions that keep enterprise networks at peak performance and availability.

When a nationwide bank was looking to replace the dialup ISDN lines that linked ATMs around the country to its data center, the Sprint customer care team came up with a novel solution. It started with wireless connectivity from the ATMs to the Sprint MPLS network that connected to the bank's data center, a solution that cut monthly service costs by more than half.

But the bank also needed a cost-effective solution for managing the wireless modem and Sprint Mobile Broadband card at each ATM location. That's when the design team hit on a deal-making idea.

"The customer already had a field force of ATM technicians who would have to be on site if there was any kind of failure," says Art Constantine, a Director of Wireline Service Delivery at Sprint. "We created a toolkit for them with spare equipment in it for the wireless network. Anytime they use anything out of the toolkit, they let us know and we send them a new one."

Sprint customers benefit every day from that kind of innovative thinking on the part of Sprint customer care teams. The bank's experience shows how the Sprint team works together on behalf of customers to help them control costs while implementing services that give them a competitive edge. It also shows how Sprint can seamlessly implement converged wireline and wireless solutions, an important capability in an era when employees must be enabled to work virtually wherever and whenever they need to conduct business.

Of course customer requirements vary widely, so Sprint offers an array of services to address their varying needs. Whether it's a converged voice, data and video network, a managed service or an international network, Sprint has the products – and support – to keep the network up and running.

SATISFIED CUSTOMERS

Employees, partners and customers alike expect the network to be "always on," so support has perhaps never been more important. And Sprint is achieving high grades from its customers.

Wireline customer service satisfaction has shown consistent improvement, culminating in more than 94% of customers saying in June 2008 that they are satisfied with the performance of the Sprint business service center overall as well as their individual representative, according to the GfK Custom Research North America, which conducts monthly customer satisfaction surveys for Sprint (see graphic).

Jerry Williams, Sprint Director of Customer Care for Implementation Support, says those scores stem from the experience of the Sprint team. The average Sprint wireline support specialist has been on the job for more than 12 years, and the specialists have an attrition rate of only 1.2% per year.

"We have people who can think outside the box, and we go outside the box a lot. People feel confident doing what they need to do to take care of customers," Williams says.

OFFERINGS FOR EVERY NEED

Sprint provides myriad offerings designed to meet the support needs of any customer, including:

Dedicated account management: All members of your Sprint account team have their own specific responsibilities. As your product and service requirements grow, so will your account team.

Enterprise network design: Sprint has a specialized organization, the Enterprise Network Design Group (ENDG), to assist in determining the best technological solution for your business applications.

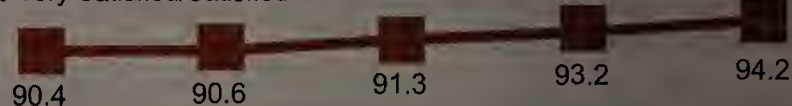
Implementation project management: Sprint provides a single point of contact that works closely with the customer team to ensure successful project implementation. This dedicated Implementation Project Manager (IPM) supports every part of the process and is an integral part to the planning, design and execution of the customer's customized solution.

CONSISTENT SATISFACTION

In ongoing satisfaction surveys, Sprint customers report consistently high grades for the Sprint Business Service Center overall as well as for individual representatives.

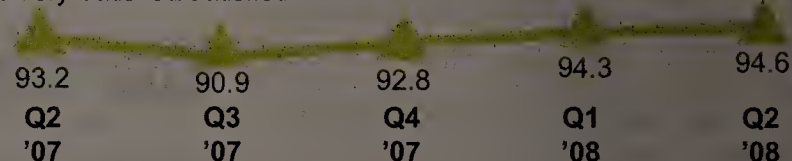
Overall Business Service Center Satisfaction

% Very Satisfied/Satisfied



Overall Satisfaction with Business Service Center Representative

% Very Satisfied/Satisfied



SOURCE: GfK Custom Research North America surveys conducted for Sprint. More than 600 customers participated in each survey.

Performance management: In addition to monitoring its own network 24x7, Sprint offers its business customers Compass, a web-based, on-demand support tool to optimize and manage their own IP/MPLS networks. Compass is a self-service portal that allows users to:

- Quickly locate network connections, ports and configurations
- Obtain real-time network status and performance statistics
- Access historical reports and Class-of-Service policy performance
- Perform initial troubleshooting and testing prior to reporting an issue
- Initiate network change requests

Global customer resource centers: From regional support centers in Europe, Asia-Pacific and the Americas, Sprint provides in-language troubleshooting during local customary business hours as well as after-hours support.

Sprint takes pride in providing business customers the best support possible for their wireline and other Sprint services, including for converged wireless/wireline networks. It was especially gratifying, then, to earn 2008 Domestic Wholesale Best in Class awards in categories of Provisioning and Customer Service from the consulting and research firm ATLANTIC-ACM.

"We take time to get to know our customers and understand what's important to them," as Constantine puts it. "We set expectations that are achievable and meet the customer's needs. And then we strive to meet those commitments."

Cisco releases bundle of router security patches

Cisco has issued a set of security patches for the Internet Operating System software used to power its routers and switches. The patches were published last Wednesday, the date Cisco had previously set aside as the latest release date for its twice-yearly IOS patches. Cisco also published 12 security advisories describing the bugs, noting that many of these vulnerabilities could be exploited by attackers to crash an IOS device. One of the bugs, a flaw in SNMP, could be exploited by an attacker to seize control of the router. However, only specially configured Cisco uBR10012 series devices, used by telecommunications companies to connect broadband customers to the Internet, are affected by the flaw, Cisco said. Symantec rates this flaw critical and advised users of these devices who have configured their routers for linecard redundancy apply the patches as soon as possible. Other bugs that were patched affect Cisco's multicast, SSL processing, and Session Initiation Protocol software. www.nwdocfinder.com/6852

Sprint's WiMAX network set for October launch. After months of anticipation, Sprint Nextel will make its WiMAX network available commercially for the first time in Baltimore next month. Some had questioned Sprint's commitment to rolling out WiMAX services last year after ex-CEO and WiMAX proponent Gary Forsee resigned. The mobile broadband technology's future was further clouded after Sprint and rural carrier Clearwire last November called off their plans to jointly build out a nationwide WiMAX network. But after securing investments from several major technology and communications companies — including Google, Intel, Comcast, Time-Warner Cable and Bright House Networks — Sprint and Clearwire teamed again to create a \$14.5 billion WiMAX venture. The group's goal has been to roll out services in Baltimore, Washington, D.C., and Chicago this fall, with plans to launch the technology nationwide next year. www.nwdocfinder.com/6853

OpTier raises \$62 million in funding. OpTier landed more than \$62 million in new funds to augment development of its business transaction-management software and promote company growth, potentially via acquisition. OpTier, founded in December 2002, closed a fourth round of funding totaling \$47.5 million from new investors Index Ventures and Morgan Stanley and existing investors Pitango Venture Capital, Carmel Ventures, Lightspeed Venture Partners, Gemini Israel Funds and strategic partner Cisco. Separately, OpTier announced it secured a \$15 million credit line with Plenus Venture Lending, an Israel equity-based debt fund that provides credit facilities to revenue-stage technology companies. The funds will be put to use to "aggressively pursue plans to enhance and broaden the company's offerings in the business transaction-management market via

acquisition and organic development," a company statement reads. www.nwdocfinder.com/6854

NASA ramps up weather research with supercomputer cluster. NASA's Center for Computational Sciences is nearly tripling the performance of a supercomputer it uses to simulate Earth's climate and weather, and our planet's relationship with the sun. The agency is deploying a 67-teraflop machine that takes advantage of IBM's iDataPlex servers, new rack-mount products originally developed to serve heavily trafficked social-networking sites. The servers use an innovative design that saves on power and cooling costs by placing the servers sideways and using a liquid-cooled rear-door heat exchanger. At NASA, scientists are integrating the iDataPlex cluster with an existing system, resulting in the addition of 1,024 quad-core Intel Xeon processors and raising performance capabilities from 25 to 67 teraflops (trillion calculations per second). www.nwdocfinder.com/6855



Intrusion-prevention systems still not used full throttle. Network-based intrusion-prevention systems are inline devices that detect and block a wide variety of attacks, but the equipment still is used often more like an intrusion-detection system to monitor traffic passively, new research shows. Infonetics Research interviewed 169 security professionals responsible for managing IPSes in their organizations to find out whether the full features of the IPS filters for blocking attacks were actually used, and the reasons why they

weren't. The first step in an IPS typically is the decision to use it in-band or not; Infonetics found that 91% of TippingPoint (which commissioned the study) customers did so, along with 70% of Cisco customers, 67% of IBM and McAfee customers, and about 55% of Sourcefire customers. Reasons cited for not wanting to run an IPS in-band were reliability, throughput, traffic latency and false positives. "People are still very cautious with IPS," says Jeff Wilson, principal analyst for network security at Infonetics. "My main impression is we are still not in an all-IPS world, as much as everyone would like to pretend we are." www.nwdocfinder.com/6856

Microsoft pitches data-center tent. IT professionals are pushing the operating parameters that server vendors recommend for such factors as air temperature and humidity, and finding that servers often are far harder than they expect. The difference can mean significant operations savings. Microsoft recently found that a little rain, uncontrolled temperature and even leaves sucked into server fans had no negative effect on servers. In a small experiment, two Microsoft employees put five HP DL585 servers in a large, metal-frame tent outside from November 2007 through June 2008 and had zero failures. "While I am not suggesting that this is what the data center of the future should look like ... I think this experiment illustrates the opportunities that a less conservative approach to environmental standards might generate," wrote Christian Belady, principal power and cooling architect, in a blog post. Similarly, Intel recently published a study about a data center test it conducted that relied almost exclusively on outside air for cooling. The test environment had a failure rate very similar to the failure rate of one using traditional air conditioning and humidity controls, Intel found. www.nwdocfinder.com/6857

Unisys CEO steps down. Unisys CEO Joseph McGrath will resign his position, the company said last week. McGrath, who will continue running day-to-day operations until a successor is found, has held the top job since 2005, but the board now is searching for a new leader. On July 23 Unisys reported that revenue for the second quarter of 2008 declined 3% to \$1.34 billion from \$1.38 billion in the same quarter last year. The company's strategic focus was outsourcing, enterprise security and open source services, in the face of lower revenue during the quarter, primarily because of weakness in the financial services industry, McGrath said in July. Recently Unisys announced the availability of its services-based solutions for Microsoft Windows Server 2008 Hyper-V and the Microsoft System Center management suite. www.nwdocfinder.com/6858

Enterasys CEO Fabiaschi dies suddenly

Chairman Mark Stone named interim CEO

BY JIM DUFFY

Enterasys President and CEO Mike Fabiaschi passed away suddenly last week at his home in Rye, N.H. He was 53.

Enterasys Chairman Mark Stone has been named interim CEO.

Fabiaschi, a 25-year industry veteran, joined Enterasys in April 2006. He came to the company from management software giant CA, where he was a senior vice president responsible for launching CA's efforts in the telecommunications vertical and for its fault and performance management software business.

Prior to CA, Fabiaschi was president and CEO of Aprisma, a fault- and performance-management company that was spun out from Enterasys in 2002 and bought by The Gores Group, which leads the private investor group that purchased Enterasys in March 2006.

"Mike led Enterasys and other technology companies with a passion for driving customer-centric changes and sales skill leadership," Stone said in a statement. "He put his heart and his mind into every effort in both his personal and professional life. Mike leaves a remarkable legacy that his business associates and friends will benefit from for years to come."

Fabiaschi had just helped swing a \$550 million deal for Gores to acquire Siemens' Enterprise Communications group and combine it with Enterasys and other Gores assets. The deal enabled Enterasys to obtain a significant, multibillion dollar presence in VoIP, security and wireless in order to better compete with Cisco in the Ethernet switching market.

Fabiaschi hinted at such ambitions months before the deal.

"Mike was an outstanding individual, a valued friend and he will be sorely missed by everyone," said Alec Gores, founder, chairman and CEO of The Gores Group, in a statement. "Our sympathies are with his wife and family during this difficult time."

Fabiaschi is survived by his wife and two daughters, one grandchild, four siblings and his father.

Fabiaschi also served as chairman, president and CEO of LPA/XELUS, a service and supply

chain management software company in the high-tech, transportation, aerospace and defense industries. He also served as president and CEO of Zamba/Racotek, a public wireless networking and CRM systems provider.

Prior to Zamba/Racotek, Fabiaschi held several senior sales positions at MAI/Basic Four and Burroughs Corporation.

"The industry has lost a great leader," said *Network World* CEO John Gallant. "Mike was a champion of the view that customers are your best asset and he worked so hard to build and nurture strong customer relationships. He really focused on making the companies he worked with more responsive and open to customers and ensuring that their needs were met. IT executives have lost a good friend and the industry is diminished by his passing."

Here's what one of Fabiaschi's Enterasys customers wrote to us:

"The news today of the passing of Mike Fabiaschi has saddened us all here at UNC. Our prayers and concerns go out to his family and all in Enterasys who were privileged as we were to work with Mike."

At a personal level, Mike was to all of us a likable, warm fellow. However, it was his character and values that he brought to business that are most unique. It is hard to put into words these values. Those that stand out to me are:

- Real customer-driven business, not just lip service
- True customer engagement
- Develop the best products
- Be the best, not necessarily the biggest
- Differentiate from other companies
- Bring value to your products
- Support employees who produce
- Standards-based products taking the longer, wider view
- Leadership without arrogance

In our world there is much news of big business doing illegal and unethical things. When constant reminders of this would invariably get me down, I would always remember Mike Fabiaschi and know it was possible to run a business AND do it right. He will be missed."

Mike Hawkins

Associate Director of Networking
University of North Carolina at Chapel Hill

To read more comments readers left in memory of Fabiaschi, go to www.nwdcfind.com/6843 ■



Enterasys President and CEO Mike Fabiaschi was known for making companies more responsive to customer needs.

InBrief

McAfee to acquire Secure Computing

McAfee announced an agreement to acquire Secure Computing in a transaction valued at \$465 million. The deal is aimed at combining Secure Computing's strengths in firewall, Web and e-mail gateway filtering with McAfee's intrusion prevention, desktop encryption, data-loss prevention, antimalware and regulatory compliance technologies. John Pescatore, an analyst at Gartner, says the merging of these security firms provides a benefit of scale in product offerings. "It gives McAfee and Secure Computing a way to compete with Cisco and Juniper," Pestacore says. But he also notes there is overlap in the product lines with both vendors supplying Web gateways. McAfee, headquartered in Santa Clara, Calif., has 4,558 employees globally and Secure Computing, with about 900 employees, is headquartered in San Jose. The vast majority of Secure Computing employees are expected to join McAfee.

Red Hat beats earning estimates

Red Hat slightly topped analysts' estimates by posting revenue for the fiscal 2009 second quarter of \$164.4 million. Analysts polled by Thomson Reuters had been expecting \$163.6 million from the Linux and open source software vendor. Red Hat's second-quarter revenue represents a 29% increase over the same quarter a year ago. Net income for the quarter was \$21.1 million, a nearly 16% increase over last year. During the company's earnings call with financial analysts, Red Hat CEO Jim Whitehurst said the vendor continues "to see strong renewal and up-sell from our customer base. Cost savings is resonating well." The company's JBoss middleware business is growing at a rate that is more than twice that of Red Hat's platform business anchored by the Red Hat Enterprise Linux operating system, Whitehurst said.

IBM launches four cloud-computing centers

IBM opened cloud-computing centers in four countries last week to let enterprises, universities and governments test Web-based services and applications. The cloud-computing centers are in Bangalore, India; Hanoi, Vietnam; Sao Paulo, Brazil; and Seoul, South Korea. Cloud computing is a new technology, and issues such as usage models need to be studied, said Ponani Gopalakrishnan, vice president of IBM's India Software Lab.

Another Day, Another Crisis?

The Common Denominator in Performance Nightmares

Just Another Day at the Office

You've probably had it happen, and there's nothing quite like it. First thing Monday morning, a "MUST be handled before noon!" list of emergencies hits you in the face:

- The sales manager is squawking because CRM database is slow.
- Accounting is nagging because email is slow.
- The NAS server is averaging unacceptably high counts of queued disk I/Os.
- You're getting constant poor performance alerts from the SAN.
- Backups have not been completing during the backup window.

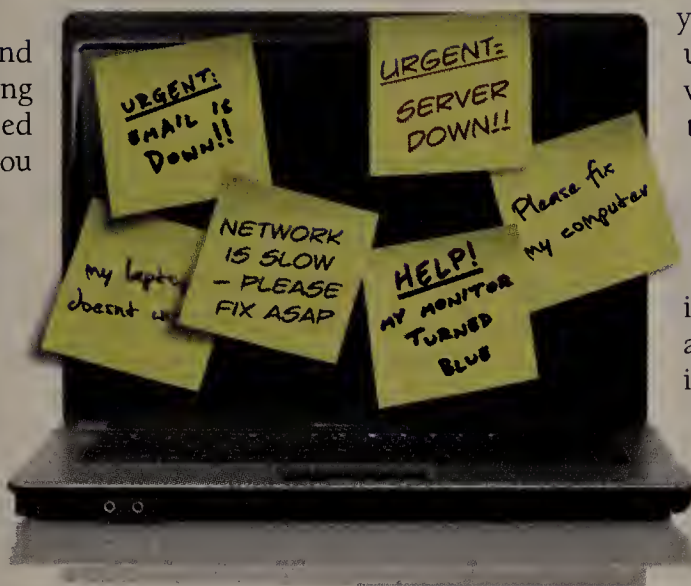
These nagging, ulcer-creating problems are also the subject of several emails from the CFO because, on top of being bad for company production, in this time of economic uncertainty they're also bad for business. Work is being slowed down and the company is losing money.

The Culprit

The common hardware denominator to all these crises is the hard drive—the slowest link in a computer system. If the data on a hard drive is fragmented, that already dragging weakest link becomes agonizingly slower.

With frenetic requirements for continuous data access, enormous files and huge disk capacities, fragmentation is worse than ever; files in hundreds or even thousands of fragments aren't at all uncommon. Brett Taylor, of Van Wert Medical Services, discovered just how bad it can get. "Our electronic medical records server is a Microsoft® SQL Server® and one day it came to a halt," he says. "I did everything: ran spyware software, deleted numerous temp files, ran Windows® update, etc. but nothing would allow the server to run. It turned out that the hard drive was horribly fragmented."

Craig Merchant of Pace Engineering, San Francisco, discovered very similar problems. "I get a huge amount of fragmentation when I run multiple virtual machines on my system using VMware®," he reports. "I've had as much as 20% fragmentation that the Windows defrag utility couldn't get rid of. In my experience,



virtual machines fragment their disks as much as real machines. But Windows systems running VMware tend to have extreme fragmentation problems, particularly when running multiple VM's."

Making Mondays Go Away

Making the right defragmentation technology choice in today's frantic fragmentation environment is vital. Scheduled defragmentation has become a problem due to the IT hours required to schedule defragmentation and the downtime required for the defragmenter to run. But worst of all, scheduled defragmentation is no longer fully addressing fragmentation.

The only solution that stands up to today's escalating fragmentation is Diskeeper®. Diskeeper's proprietary InvisiTasking® technology makes for completely automatic, invisible defragmentation. Because it utilizes otherwise idle resources, it requires absolutely no scheduling, freeing up IT time for more important tasks. There is never a negative performance hit during defragmentation, and system performance and reliability are consistently maximized.

Reliability and Performance Issues Become Nonexistent

Mike Driest, Network/Systems Administrator for Industrial Control Repair in Warren, Michigan, has found Diskeeper to be the only solution. "Automatic disk defragmentation for a server is like oil for the engine in

your car," he says. "One of the most useful features about Diskeeper, when using it on our 20+ servers, is the automatic defragmenting with InvisiTasking. Diskeeper helps all of our servers (Domain Controllers, File, Exchange, SQL, Web, etc.) perform at their very best. Reliability and performance issues relating to a lack of defragmentation do not exist in our environment."

Diskeeper has proven the solution for Andrew Wise, Senior Network Engineer at Datacore Marketing in Westwood, Kansas as well. "We run Diskeeper primarily on our SQL database servers with Fibre Channel SAN connectivity," he says. "It keeps the database and log files defragmented at the OS level to reduce the I/O on our SAN. After installing Diskeeper and doing a full defrag, we noticed around 10–15% reduction in the amount of I/O generated and in the amount of time it took for the SAN to service each request. We are a Microsoft SQL Server database shop and we process terabytes of SQL data on a daily basis, so any reduction in the amount of time it takes to do that processing save us money."

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Nortel looking more to software

Company's Metro Ethernet Networks business is up for sale

BY JIM DUFFY

Nortel's decision to divest its carrier Ethernet and optical businesses was based on the company's shift to a more software-driven business model, the outgoing head of those businesses says.

Nortel is shopping its Metro Ethernet Networks unit to raise cash for other key product areas, which now include carrier VoIP, enterprise and "application services," says Philippe Morin, departing president of the MEN business. Morin will go to the company that acquires the division.

"Nortel is really stating that it's now going to focus more on application services — what we basically call ICT," or Information, Communication and Technology, Morin says. "When you look at MEN . . . it's addressing a unique market — different from all of the other businesses at Nortel — and it's a market that requires consolidation."

MEN is a \$2 billion business that accounts for 14% of Nortel's revenue. It's the smallest piece of the company pie after carrier, enterprise and services, but includes much more than just Nortel's Metro Ethernet Routing Switch (MERS) 8600, the pillar of the company's ambitious Provider Backbone Transport campaign for building more efficient metro Ethernet networks. MEN also includes optical infrastructure

BILLIONAIRE BUSINESS

The Metro Ethernet market exceeded \$1.4 billion in Q2, almost three times its size during the second quarter three years ago, according to Dell'Oro. The market is expected to near \$6 billion for the year.

products, such as the OME 6500 and 40G and 100G metro- and long-haul transport systems, as well as the Passport 7000 and 15000 series multiservice switches. Optical and multiservice switches are multibillion-dollar markets — the optical transport market is three times the size of the carrier Ethernet market.

So, MEN's \$2 billion in revenue and 400,000 installed network elements are parsed among three sizable markets, not just carrier Ethernet.

The market is crowded, as Morin suggests, but also booming. In addition to Nortel, there are 20 vendors making carrier Ethernet switches, all vying for a market growing at a compounded annual rate of 42.5%, to \$4.6 billion in 2007, according to Dell'Oro Group. The market

exceeded \$1.4 billion in the second quarter of 2008, almost three times its size three years ago, Dell'Oro says. It's expected to approach \$6 billion for the full year.

Nevertheless, "there are way too many players here," Morin says. "Everybody's staring at each other saying, 'Who's going to pull out?' We've been on that sort of path for the last three years."

Morin wouldn't say if there have been offers for the unit, only that there is at least one interested party. The deal is not contingent on which company might be the acquirer; the focus is on getting the most from MEN, he says.

"We're looking for Nortel to get the most value as this asset is worth — and this is basically cash," Morin says. "This is not a fire sale — we're looking at buyers and partners that will come in and really look at us as a way to consolidate the industry, grow and take a lead in that market."

Other reasons behind the decision to divest MEN were Nortel's need to focus on fewer markets and to allow the MEN business to thrive under new, less burdened ownership, Morin says.

"Couple [our momentum] with a new owner which is really focused into that market, then . . . this is absolutely, in my mind, in a great position to lead and grow the market," Morin says. ■

Open source could fix e-voting flaws

BY JON BRODKIN

California Secretary of State Debra Bowen argued last week that open source software can help fix some of the flaws in electronic voting systems, which have proliferated throughout the country since the 2000 election, yet been criticized as unreliable.

Software that designs ballots and operates electronic voting machines would benefit from more scrutiny, Bowen said during a panel discussion on e-voting at EmTech, the Emerging Technologies Conference at MIT. As secretary of state, she can examine the code of proprietary software under nondisclosure agreements, but privileged information about voting-software flaws is not easily accessed by the public or many county workers given the job of purchasing voting machines, she said.

"I have a separate set of documents that only I can see, that tell me what some of the flaws are related to proprietary software," Bowen said, arguing it would be better to disclose all the software details through an open source model.

Voting machines are purchased by individual counties rather than the state, and in many cases the people purchasing these machines don't have any good way to verify their reliability, Bowen said. "We're basically asking a county IT professional, who may or may not have any experience in crypto-security, to purchase a system," she said. "The software is proprietary. In most cases, the person who does the purchase has no legal right to review the software, even if they knew what they were reviewing."

Open source software could help design more effective ballots, Bowen said. Ballots vary widely by city and neighborhood because there are many local elected boards. One of the early problems California had with touch-screen voting is that voters were sometimes presented with the wrong ballot, she said.

Bowen, a former lawyer, state legislator, and Los Angeles County poll worker, was elected to her present position in November 2006; she then commissioned an independent review of the state's voting technology and another review of its election-auditing standards.

California's reviews determined there are security flaws in every voting system, whether it be a touch-screen voting machine or a system that scans paper ballots marked by hand, Bowen said.

Anyone with a screwdriver would have been able to access the inner workings of certain machines, Bowen said, and others were vulnerable to computer hackers who potentially could change the results of elections. A separate analysis in 2006 by Princeton University looked at the Diebold AccuVote-TS voting machine and found it was vulnerable to extremely serious attacks, including the installation of malicious code through a removable memory card.

Bowen said she wants to move away from direct-recording electronic (DRE) voting machines, which typically require voters to cast votes using buttons or touch screens, because they lack a way to independently verify results. Instead, she favors using optical scanning machines with paper ballots, which allow hand counts if necessary. ■

Four steps to controlling mobile devices

BY JOHN COX

If you've ever let a stranger borrow your corporate smartphone, you may have just given him a gift of your company's data. The reason: he might have palmed a small USB device called the CSI Stick, and surreptitiously plugged it into your phone. The device can drain every bit of data from a cell phone in seconds, says Patrick Salmon, a mobility architect for Enterprise Mobile, a technology services company that specializes in Windows Mobile deployments.

Increasingly, companies want to give mobile or field-based employees direct, instant access to critical corporate applications previously accessible only from a desktop. To do so, existing security, authentication and management infrastructures have to be extended and adapted so that mobile devices, along with their data and wireless connectivity (cellular or Wi-Fi), are managed as surely and fully as desktop PCs.

But that's not the case in many mobile deployments today, according to consultants who, like Salmon, specialize in working with

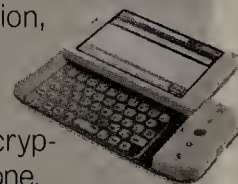
enterprise customers. "What we see is an ill-defined policy regarding devices," says Dan Croft, president and CEO of Mission Critical Wireless, a technology services company that specializes in mobile deployments.

Often personal handhelds are granted wireless access, something that would never be allowed with a personal computer, creating security vulnerabilities, manageability challenges and tech support burdens, Croft says. Companies don't plan beforehand about how to handle lost, stolen or broken

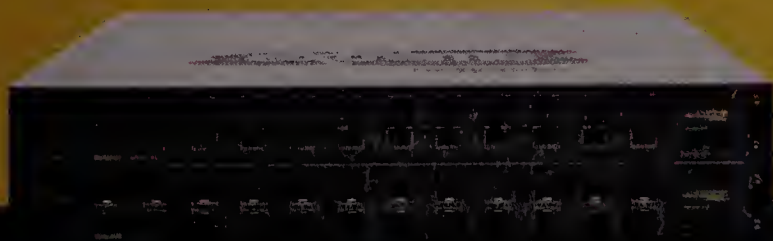
See Wireless, page 14

Taming mobile devices for the enterprise

- Use a comprehensive mobile device management suite.
- Enforce the strongest password/PIN the devices support.
- Know what you'll do when devices go missing.
- IPsec and VPN keep network connections safe.
- Allow connections only if clients pass muster.
- Selectively encrypt device-based data: user information, certificates.
- Unless you're the CIA, almost any encryption is better than none.



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Google hasn't heard last from Ballmer

Microsoft CEO also addresses Apple and economic, virtualization issues

BY JAMES NICCOLAI, IDG NEWS SERVICE

Microsoft may be the only company in a position to provide "any real competition" for Google in the online search business, CEO Steve Ballmer said last week. But first it will need to figure out a way to do it.

"We need to do some work to fundamentally reinvent the search business model," Ballmer said during a dinner at the Churchill Club in Silicon Valley. "You don't brute-force your way into a market. You only make great strides when you redefine the category for the user."

And that will take some time. "It's a five-year task," Ballmer said. Microsoft, however, is ready to spend a lot of money trying. The company told its shareholders recently that it was prepared to lose 5% to 10% of total operating income for several years to improve its position in search, Ballmer said.

The CEO offered little in the way of new insights during the evening, except that Microsoft will discuss Project Red Dog, its secretive cloud-computing initiative, at the Microsoft Professional Developer Conference next month. Red Dog has been described as "EC2 for Windows," a comparison with Amazon's Elastic Compute Cloud, said Ann Winblad, a venture capitalist who posed the questions to Ballmer. She asked him to elaborate but he said she would have to wait for the conference in six weeks.

Asked about server virtualization, Ballmer said Microsoft aims to "democratize" the technology by offering lower prices, integrated management tools and better-quality software. "If you want to have virtualization on 80% of servers instead of 5%, you'd better not charge three times the price of the server for the software," he said, in a jab at market leader VMware, which has been criticized for high prices.

Asked about smartphones, Ballmer said Nokia, Research In Motion and Apple will lose out as the market expands over the next five years because they design their own proprietary hardware and tie it closely to their software.

Nokia leads the smartphone market today with about a 30% share, Ballmer said. "If you want to reach more than that, you have to separate the hardware and software in the platform," he said.

In other words, Ballmer thinks the same strategy that helped Microsoft become the leader on the desktop — licensing its operating system for use by other hardware makers — will let it win out on smartphones. Long term, he said, the battle will be between the Symbian operating system (which now is open source), mobile versions of Linux and Windows Mobile.

Apple won't boost its share of the PC market or become a threat in the enterprise because it



"We need to do some work to fundamentally reinvent the search business model."

Steve Ballmer
CEO, Microsoft

won't license its software to others, according to Ballmer.

"Apple's a good company, I won't take anything away from them, but they have a certain kind of strategy," Ballmer said. "They believe in putting the hardware and software together. They don't believe in letting other people make it."

"I'm not saying there isn't a threat" from Apple, Ballmer said. But if Microsoft and its PC partners "do our jobs right, there's really no reason Apple should get any footprint in the enterprise."

Microsoft does "very well on balance" when it comes to software developers, Ballmer said. The company, however, has two areas of weakness, according to Ballmer: in high-performance and technical computing — which is important to Microsoft because "there are 5 million engineers and they use a lot of compute power" — and in Web server

applications, where it is losing out to Linux and PHP.

"Forty percent of servers run Windows, 60% run Linux," Ballmer said. "How are we doing? Forty is less than 60, so I don't like it.... We have some work to do."

Winblad asked about the health of the IT business in light of the economic crisis in the United States. "At least for now, people I talk to in our business are relatively — I wouldn't say optimistic — but they feel better than if all you did was watch CNBC all day," Ballmer said, referring to the television news channel.

A member of the audience asked Ballmer how he manages his stress and stays healthy. Ballmer, who looks thinner and fitter than he did a few years ago, said his regime consists of PowerBars "to keep the blood sugar steady," "a constant dose of caffeine," and running.

"I did a five-mile run this morning. It does a lot to ease the stress and set up a good day." ■

Info Cards technology is standardization bound

BY JOHN FONTANA

Information Cards, the identity specification developed by Microsoft, is headed to a standards body that will work to ensure interoperability among implementations and adoption as a standard authentication method across the Internet.

The Organization for the Advancement of Structured Information Standards (OASIS), which is known for hammering out Web services standards, has created the OASIS Identity Metasystem Interoperability (IMI) Technical Committee. The group plans to hold its first meeting Sept. 29 in London.

This is the first effort to take the user-centric identity model championed by Microsoft and others, such as Novell, Oracle and IBM, and have it standardized for use across platforms and across the Internet.

Microsoft's InfoCard technology and its user-interface implementation called CardSpace present users with an identity-selector interface, basically a palette of secure identity cards that can be used to authenticate to various Web sites or such network resources as applications or databases. It is all part of the company's Identity Metasystem that also includes back-end servers and gateways for exchanging cards and the data they contain.

OASIS will focus on making sure implementations of the Information Cards technology, first introduced by Microsoft in 2005, are interoperable. It will not create an entirely new specification.

The foundation of the IMI's work will be built around the Identity Selector Interoperability Profile (ISIP) from Microsoft, the Web Services

See Info Cards, page 36

PAUL'S DOMAIN.

I designed the foundations of DNS 25 years ago to be simple and modular.

That's how dozens of extensions have been successfully added over the years to, for example, integrate DNS with DHCP, route VOIP calls, lookup RFID tags, and use international character sets. All aspects of the DNS are larger now. The email that needed one DNS lookup in 1983 now needs dozens for delivery and spam checking — not to mention a billion or so new public and private domain names.

But don't let this seeming complexity get you down.

The first key for dealing with this challenge is to select tools that have been tested, proven and use the same simple and modular approach. That way, effort in one application helps another. At Nominum, we tested our ENUM servers to be sure that they could handle DNS databases that had millions of separate zones and billions of resource records and still deliver instant server restarts and still deliver industry-leading performance. That meant that when a huge antis spam database application came our way we knew there was no scaling issue.

The second key is to use the advanced technology to monitor and control your DNS (and DHCP) systems.

You shouldn't expect your sysadmins to validate security credentials by hand or learn new languages when your business goes international. Human error is always a concern. DNSStuff uses its own dedicated network assets to monitor your DNS systems at a level of detail unmatched by other tools, then it uses its proprietary algorithms to give you the most specific results and actions to fix any problems. When new DNS applications and extensions are added, DNSStuff tools are there. Not all DNS tools are created equal.

Paul Mockapetris, Father of DNS, invented 1983

 **DNSstuff.com**
WHEN GOOD ISN'T GOOD ENOUGH.

Wireless

continued from page 11

devices, or the data on them. "IT needs to get control of wireless [mobility] within their company," he says.

Taking control falls into four broad areas, says Jack Gold, principal of J. Gold Associates, a mobile consulting company: securing and managing every device; managing every connection; protecting every piece of data; and educating every user.

Mobile devices, whether bought by the company or by the individuals, are accessing company networks and company data. Device security and management are closely intertwined, because you have to be able to monitor the devices in order to enforce policies.

In most cases, practitioners recommend standardizing on two or three mobile device models, minimizing the support, security and management challenges. "Other smartphones [brought in by users] might not be capable of supporting your specific security and administration policies," Salmon says.

Using mobile device passwords or PINs is advised. "If your enterprise doesn't enforce a password policy on those devices, you might as well stop with all your [other] security measures," Croft says.

Salmon favors PINs, coupled with a limit on the number of access attempts. After that number, the next attempt triggers an automatic lock or wipe of the handheld.

Enforcing effective passwords is one of the essentials at Florida Hospital, in Orlando, where wireless notebooks are widely used by staff and nurses, along with BlackBerries for e-mail. The hospital also is exploring what's involved in granting access to clinical systems from physicians' smartphones.

The hospital enforces regularly changed passwords (a function of its enterprisewide identity management infrastructure), up-to-date antivirus software and some ability to remotely wipe data from mobile clients, says Todd Franz, associate CTO. "We see the need to protect the data on these mobile devices just as much as we do on a desktop PC," he says.

On selected notebooks, the hospital also uses the CompuTrace service from Absolute Software, a kind of "LoJack for laptops." A stolen computer can be traced and tracked down. Franz won't say how often hospital laptops have been stolen, but the hospital has successfully resolved 100% of the cases involving CompuTrace-protected laptops. According to

some accounts, 10% to 15% of all mobile devices go missing.

Consider using comprehensive device management applications such as Sybase's Afaria, Credant's Mobile Guardian, Nokia's Intellisync, Microsoft's System Center Mobile Device Manager, and others from CheckPoint and Trust Digital. These policy-driven suites blend monitoring and enforcement capabilities that focus on mobile clients, and typically work with back-end authentication and other servers.

It's also important to have the ability to wipe, lock or kill any mobile device that's stolen, lost or unaccounted for on a

options." That's chiefly because while the target server has a certificate and is trusted, the SSL client is not. IPSec requires that ports have to be specifically opened, but both ends of the connection have certificates, he says.

A related issue is allowing mobile devices to connect only if they pass muster. Is the antivirus software up-to-date? Is the VPN active? Is the Wi-Fi connection from a public hotspot?

Selective data encryption should be an essential item in any mobile deployment.

With a managed mobile device, you can distribute and enforce encryption policies for specific data. "Document folders, your e-mail in-box, user data, contacts, certificates, and so on as the kinds of things that should be encrypted," Gold says. Also consider encrypted or encryptable removable storage devices, such as high-capacity SD cards, he says.

"Unless you're in a 'James Bond environment,' most encryption levels will give you far more security than sending an unencrypted e-mail over the Internet, which happens all the time," Croft says.

Educating every user

"Few companies educate end users on the proper procedures and policies to safeguard [mobile] corporate assets," Gold says. "Get the users on your side."

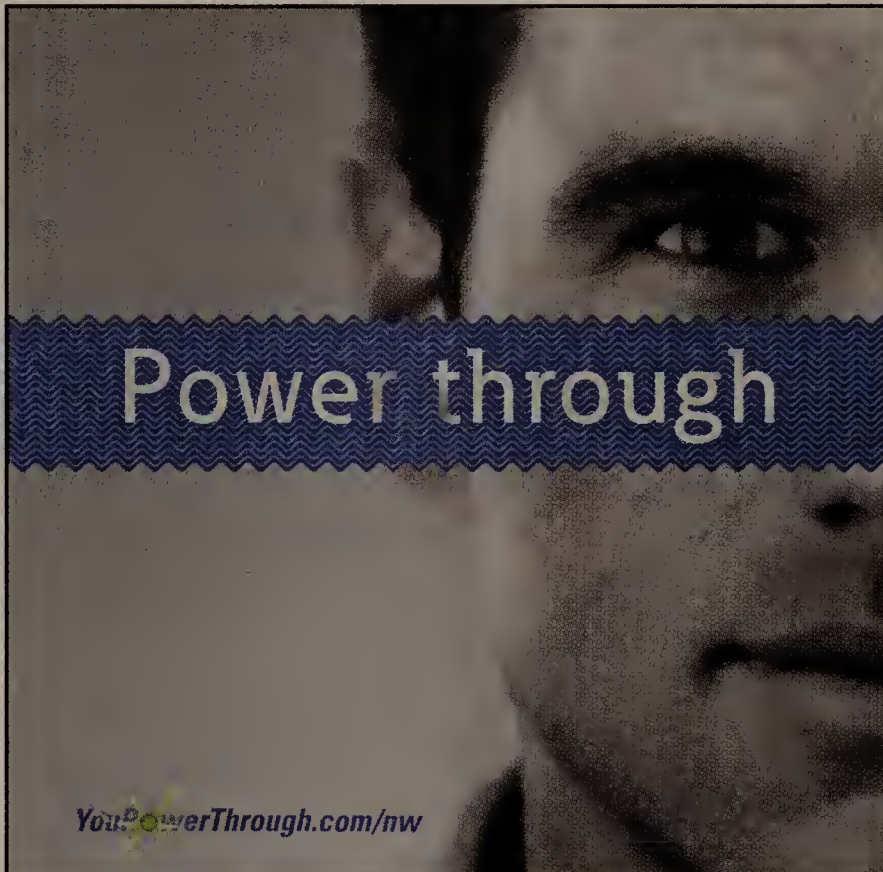
"The greatest vulnerability is human," Salmon says. "If a stranger asked to borrow your laptop for five minutes to check his stock portfolio, you'd say 'No!' because you've been educated about the risks. There's no way you're going to let a stranger use your laptop. The same thinking has to apply to your mobile phone."

To school its nurses in mobile technology, Florida Hospital relies on trainers who also have been, or are, nurses. "They speak the same language as the users," Franz says. "We try to keep IT people out of the way of this training, because they do not speak the same lan-

guage."

Franz makes a key point about nurses and mobile technology that's relevant to all such deployments. "People don't go to nursing school to become a clerk-typist," he says. "They go because they want to help people. Technology can assist them in doing that."

Acceptable-use policies should be short and to the point, otherwise they won't get read. Training should cover all the elements (explaining the device, applications and intended usage), says Alphons Evers, global solutions manager with the mobility practice of Getronics, a global IT services company. ■



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moment's notice, including its SD card if it has one. A network manager should be able to issue a command that locks a device until the right password is used, wipes or deletes some or all of the corporate data on it, or shuts it down entirely, Croft says.

"These connections are a pretty significant exposure if they're not done right," Gold says. "Don't leave it up to the end users."

These practitioners favor enforcing VPN connections with IPSec for mobile deployments. "SSL, which uses TCP Port 443, is the path of least resistance," Enterprise Mobile's Salmon says. "I consider this the weaker of the two

Watching for Windows 7

Microsoft Windows 7 is two years away but features, directions are emerging

BY JOHN FONTANA

One stone-cold fact about Windows 7 is that we need more stone-cold facts in order to understand the new operating system that is likely to arrive in early 2010.

The company has said some of those facts will come in late October and early November during two of its major conferences — the Professional Developers Conference (Oct. 27-30) and the Windows Hardware Engineering Conference (Nov. 5-7).

What is known beyond the Windows 7 code name is that Microsoft is building the operating system on the Windows Vista code base in order to avoid the sort of application-compatibility problems that plagued Vista early in its release. The new interface will feature the Ribbon toolbar throughout, and the server version will add the much-anticipated live migration feature to the virtualization capabilities.

Sifting through the rest of the information, rumors and tidbits out there, here are seven things to know about Windows 7 now.

1. Betas. A beta version called Milestone 3 is in the hands of testers, according to Mary Jo Foley's "All about Microsoft" blog. The early release is out to a select group and Foley is saying Beta 1, the first public beta, will be released by year-end. Other hand-dappers say it looks like the Windows Hardware Engineering Conference (WinHEC) could be the place it is released. Others are pointing to the Professional Developers Conference (PDC) as the venue where the Windows 7 Beta 1 will be introduced.

2. Final release. As far as the final release time frame, Microsoft senior Vice President Bill Veghte sent a letter in June to enterprise and business customers saying "our plan is to deliver Windows 7 approximately three years after the January 2007 general availability launch date of Windows Vista." Such clarity from Microsoft is often lacking in these announcements, but pundits are interpreting Veghte's message to mean late 2009. In February, Bill Gates, then chief software architect, hinted at the same time frame. Some reports have said the ship date will be as early as June 2009.

3. Development. Many are asking why Microsoft has a chance of completing the operating

system on such an ambitious schedule given the five years it took to get out Vista. One major reason is Steven Sinofsky, who took over Windows development in 2006 as Vista limped to its finish line. Sinofsky is best known for his workmanlike schedule for pumping out versions of Microsoft Office on a regular 18-month cycle.

new quick-install features. The glaring omission for IT is a dive into features that might make their lives easier.

5. Server version. While the client operating system is being touted as a major release (with minor revisions to the base Vista code), the server version is a minor release. Microsoft has announced that Windows 7 will actually be what was originally planned as Windows Server 2008 R2. A few weeks ago, Microsoft confirmed that R2 would bring live migration to its virtualization platform and that the server was on-target to ship in early 2010.

6. Users. Ship dates will be important. For Vista users with Software Assurance maintenance con-



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Microsoft's Steven Sinofsky is under pressure to pump out Windows 7 on schedule.

tracts, Windows 7 is already paid for as long as it ships within the length of the contract. Users who are still buying XP via downgrade rights through Vista Business and Ultimate will have mainstream XP support until April 14, 2009. Mainstream support includes such options as no-charge incident support, paid incident support, support charged on an hourly basis, support for warranty claims and

hot-fix support. If Windows 7 ships in mid-2009, April could offer a tidy migration point to begin getting the upgrade cycle cranked up.

7. Stay tuned. Microsoft has launched a Web site called "Engineering Windows 7" that is hosted by Sinofsky and his senior engineering management colleague Jon DeVaan. The blog has provided little in-depth information about Windows 7's features, but Sinofsky did say a major team goal is to "promise and deliver." Promises are what helped make Vista feel like a consolation prize. But so far the blog has only turned up tidbits like this: "Our goal is about building an awesome release of Windows 7." ■

4. Features. There are a few solids here, but speculation is clearly up and churning. In May, Gates and CEO Steve Ballmer gave the first Windows 7 demonstration, showing off multi-touch screen technology. Gates also said before his retirement in July that synchronization between Microsoft's Live Services and Windows 7 would figure prominently, as would digital ink and speech features. There are hints of a more modular operating system, much like Windows Server 2008 Server Core, and performance boosts. Recent screen shots from the Milestone 3 beta show the Ribbon toolbar in Wordpad and Paint. There is also evidence of

Skype teams up with Digium

BY TIM GREENE

Skype is becoming a more credible IP phone option for businesses through a new alliance with Digium, whose open source IP PBXs will add better control over Skype's peer-to-peer voice technology.

The alliance could mean cheaper calling for businesses and their customers by adding Skype's inexpensive Internet-based calling into the business-telephony mix.

The two companies announced the availability of a beta program for their Skype For Asterisk software at last week's session of AstriCon.

With Skype For Asterisk, businesses can give their Asterisk PBXs presence on the Skype network and let their customers who use Skype call these businesses over the Internet from anywhere at no cost beyond their ISP fees.

Incoming calls would be received by the Asterisk PBX and queued along with other incoming calls from traditional carrier networks, says Danny Windham, Digium's CEO.

Outbound calls to other Skype users would also be free, and businesses using Skype For Asterisk could buy buckets of inexpensive call minutes from the SkypeOut service to call non-Skype phones. Using Asterisk's least-cost-routing feature, using SkypeOut minutes could become an alternative to other service provider call-transport services, he says. "They could use Skype as a carrier choice."

Businesses using Asterisk now can apply to be part of the Skype For Asterisk beta program. The two companies are looking for a range of customer uses of the IP PBX so they can choose beta testers that will stress the Skype For Asterisk in a range of different ways.

After the limited beta, the software will be opened to public beta testing and finally turned into a commercial product. Skype For Asterisk works only with Asterisk Version 1.4 and 1.6 and not with earlier versions.

Skype already has Skype For Business services but cannot supply certain features such as handling high volumes of incoming calls. That would require individual Skype names for each employee who might receive calls. With Skype For Asterisk, a few Skype names can be associated with the IP PBX, which can answer and distribute the calls, says Stefan Oberg, vice president and general manager for Skype Telecom and Skype for Business. This is similar to using a trunk line and a traditional PBX vs. having individual phone lines to each employee's desk.

Oberg says the alliance gives Skype a business advantage it doesn't have now, namely a hook into value-added resellers who sell gear to end user businesses. Digium has such a VAR network that will support Skype For Asterisk. Skype currently sells directly to end users. ■

Microsoft

continued from page 1

most competent move to offer parallel computing horsepower to corporations doing more real-time simulations, designs and number crunching.

But the road is decidedly uphill.

Microsoft currently lays claim to less than 5% of HPC server market revenue, according to IDC. Those numbers compare with 74% for Linux and just more than 21% for Unix variants.

In addition, competitors such as Red Hat have been offering its Enterprise Linux for HPC Compute Nodes since last year. And Sun late last year reentered the HPC fray with its Constellation System.

Those sorts of challenges, however, have not deterred Microsoft in the past.

The company is betting users such as engineers will combine workflows running on their Windows workstations with Windows-based back-end HPC clusters, or move those workloads off the desktop and into an HPC infrastructure.

Microsoft also envisions such desktop/back-end combinations as Excel users performing a function call from their desktop, which in the background executes an agent that runs some computational algorithms on a networked HPC cluster and returns an answer. The user would have no concept of the back-end tied to Excel, which is widely used in financial services.

Since the 2006 release of Windows Compute Cluster Server 2003, Microsoft has been working with partners such as HP and Intel to create mass market appeal for HPC and the message may finally be striking a chord as prices drop and performance rises on technical computing platforms.

But Microsoft, experts say, isn't likely to replace high-end HPC environments built on Linux and Unix. The real opportunity is appealing to new buyers with a Windows desktop infrastructure looking anew at HPC for workgroups or departments.

IDC says HPC hardware revenue 2007 alone generated by workgroup and departmental platforms was nearly \$5.5 billion, just more than half of the \$10 billion total. The prices on platforms in those segments range from \$100,000 and below (workgroup) to \$100,000 to \$250,000 (departmental).

Microsoft's recent hardware-software partnership with Cray on the CX1 "personal" supercomputer aimed at financial services, aerospace, automotive, academia, and life sciences and priced at \$25,000 is testament to Microsoft's plan — as is the \$475 per node price of HPC Server 2008.

That's not to say Microsoft won't make a run for the top. Earlier this year, a Windows Server 2008 HPC cluster built by the National Center for Supercomputing Applications garnered a No. 23 ranking on the list of the world's top 500 largest supercomputers, achieving 68.5 teraflops and 77.7% efficiency on 9,472 cores.

But experts say Microsoft's sweet spot will be



Microsoft's recent hardware-software partnership with Cray on the CX1 "personal" supercomputer is only part of its plan to bring parallel processing power to the masses.

much lower down the list.

"The Microsoft strategy is aiming hardest at verticals where Windows is strong on the desktop and then extending that Windows environment upward," says Steve Conway, research vice president for technical computing at IDC. "It includes applications such as Excel and tools like Visual Studio so people can unify their desktop and server workflow."

Microsoft also plans to integrate HPC Server with its System Center tools for application-level monitoring and rapid provisioning by releasing an HPC Management Pack for System Center Operations Manager by year-end, according to Ryan Waite, product unit manager for HPC Server 2008.

The company is aligning HPC Server 2008 with Visual Studio Team Services, and F#, a development language, designed to help write new applications and rewrite old ones for parallel computing environments.

"We are looking at the holistic system," says Vince Mendillo, director of HPC in the server and tools division at Microsoft.

Familiarity is the big theme. Windows HPC Server 2008 is built on the 64-bit edition of Windows Server 2008. The platform combines into a single package the operating system with a message passing interface and a job scheduler built by Microsoft.

The server software, built to scale to thousands of cores, also includes a high-speed NetworkDirect RDMA, Microsoft's new remote direct memory access interface, and cluster interoperability through standards such as the High Performance Computing Basic Profile specification produced by the Open Grid Forum. The server features high-speed networking, cluster management tools, advanced failover capabilities and support for third-party clustered file systems.

"HPC is no longer a niche either in terms of hardware platform or in terms of pervasiveness," Illuminata's Haff says. "For the most part, it is using volume hardware and is being applied to all kinds of problems in all kinds of companies and organizations." ■

Android battles the iPhone

BY BRAD REED

While T-Mobile's Android-powered G1 phone is intended to take on Apple's iPhone, it has a long way to go before it can be considered an enterprise device.

When Apple decided it wanted the iPhone to be taken seriously as a possible enterprise device, it added features to give it appeal to corporate users and IT departments. Among the most crucial was access to Microsoft's Exchange ActiveSync, the licensed data synchronization protocol whose built-in support will give IT departments the ability to set password policies, determine VPN settings and perform remote data wipes on iPhones that have been lost or stolen. Apple also says the iPhone will have access to Cisco IPsec VPN technology.

The G1, on the other hand, doesn't have any of these features and is unlikely to have them in the near future unless a third-party developer creates them. When asked about adding support for Microsoft Exchange to the G1 last week, Google mobile platform director Andy Rubin said he didn't anticipate doing so, but such features were "the perfect opportunity for third-party developers."

Cole Brodman, the chief technology and innovation officer for T-Mobile USA, took things a step further and said the company "expects

the G1 to be more of a consumer device and not an enterprise device."

Even though the G1 is unlikely to become a staple device supported on corporate IT networks soon, it does have some attractive features that compare well with the iPhone. Here is how the iPhone and the G1 stack up:

Call quality: Although no one has yet seen how well T-Mobile's cellular network will perform under the demands of the G1 phone, we can examine both T-Mobile's and AT&T's past reputations for call quality. Although AT&T has typically ranked ahead of T-Mobile in JD Power's annual wireless service surveys, the latest survey shows the two carriers are now even in terms of call quality and in service reliability. Smartphone users who look for call quality first and foremost, however, might consider passing over both the iPhone and the G1 for a smartphone from Verizon, which has for years come out on top of JD Power's call quality surveys.

3G network coverage: While AT&T and T-Mobile have GSM-based 3G data networks, AT&T has an edge in range of coverage. In May, AT&T announced that it had finished deploying its 3G HSPA network that would deliver downlink speeds of 1.7Mbps to 350 U.S. markets by year-end. T-Mobile, in contrast, is only rolling out its 3G UMTS coverage this spring, and the carrier

estimates it will have 3G service available in 20 to 30 markets by year-end. Both devices also support Wi-Fi connections.

Operating systems: The good news for Microsoft haters is that neither of these phones runs on Windows Mobile. After that, however, it comes down to a personal preference. The iPhone's Mac OS X has set the bar for mobile operating platforms in terms of familiarity and ease of use, but Google is hoping that Android will appeal to users who don't want to have a "walled garden" approach to their mobile Internet. Software and application developers could find a lot to like with Android, which has an open source code and which will support all third-party applications.

Cost: Apple and AT&T turned a lot of heads after they slashed the price of the iPhone 3G to \$199. T-Mobile and Google are doing them one better by selling the G1 for \$179. The cost of the device is only part of the equation, however — service costs must be taken into account as well. AT&T charges iPhone users \$30 a month for data plans and \$40 a month for voice services. T-Mobile charges \$25 for a limited data plan and \$35 for a data plan that includes unlimited Internet usage but that slows down your connection speed if you consume more than 1GB of data per month. ■



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Ellison pitches hardware

Oracle software marries HP servers to offer high-end DB package

BY JAMES NICCOLAI AND CHRIS KANARACUS, IDG NEWS SERVICE

SAN FRANCISCO — Oracle saved the biggest news for last at its OpenWorld conference in San Francisco. CEO Larry Ellison took the stage last week to announce two hardware products developed with HP that are designed to provide very high performance for data warehousing applications.

Calling them "Oracle's first hardware products," Ellison introduced the HP Oracle Database Machine and the HP Oracle Exadata Storage Server, which are preconfigured server racks including Oracle software and HP ProLiant servers.

The Exadata Storage Server includes a dozen disk drives and two quad-core Intel processors that are used to conduct database query operations on the storage equipment, reducing the amount of data that has to be shuttled back to the database server. This gives a 10-fold performance boost compared with Oracle's current data warehouse products, according to Ellison.

"The storage system itself runs the Oracle database's fast parallel query software, so we took the capability you normally find in the database servers and moved it into the storage server next to each and every disk drive," Ellison said.

The storage servers can be ordered separately for use with an existing Oracle data warehouse, or as part of the HP Oracle Database Machine, which includes eight Oracle database servers and 14 Exadata Storage Servers in one rack. The database servers include 64 Intel processor cores, Oracle's business intelligence software and its Real Application Clusters technology.

Each storage server is connected to the database server with two InfiniBand pipes. Each can carry data at 20Gbps, but the speed of the system is limited to the speed of the disk drives, which limit the throughput speed to 1Gbps, Ellison said. The Storage Servers include up to 168TB of storage, he said.

Ever the showman, Ellison chuckled with delight as he stood next to one of the hulking Database Machines on stage. Joking about the storage capacity, he quipped, "This is 1,400 times larger than Apple's largest iPod."

The Linux version of the Database Machine is available, he said, with support for other operating systems to follow. He said the Exadata Storage Server will work with "any Oracle database server," suggesting customers won't have to be using the current 11g version for their data warehouse.

The Database Machine is priced at \$4,000 per terabyte of storage, plus the database license costs, Oracle said. The systems can be



"This is 1,400 times larger than Apple's largest iPod."

Larry Ellison
CEO of Oracle on the company's high-speed HP Oracle Database Machine

ordered from Oracle, and Oracle will be responsible for sales and support, while HP will handle the delivery and servicing of the hardware.

As Oracle enters the hardware game, data in the enterprise "is proliferating at astonishingly high rates," Ellison said.

"That creates a fundamental problem. The disk storage systems that are available today ... can store 10, 100T bytes of data, but they can't move that data off the disks and into the database servers very fast," he said.

There are two ways to solve the data bandwidth problem, he said: reduce the amount of data going through the pipes or make the pipes wider. Oracle did both, he said. He claimed the resulting product is much faster than competing data warehousing systems like those sold by Teradata and Netezza.

"Teradata has no intelligence in their storage server whatsoever. None," Ellison said, while allowing that Teradata's database is "pretty sophisticated."

"Netezza does very fast table scans," he said, "but their overall database capability is really primitive."

Netezza's president, Jim Baum, shot back quickly in a statement. He dismissed the Oracle-HP products, saying data warehouses need to be designed "from the ground up" by engineers in the same company, not patched together "with glue and spit."

A Teradata spokesman was more diplomatic. "On a high level, it's very difficult for us to comment on the performance claims of Oracle. ... We respect all of our competitors and look forward to competing against Oracle with this new offering," said Randy Lea, Teradata vice president of product and services marketing.

In a blog posting, Forrester Research analyst James Kobielus called the products "a bold move into petabyte scale-out territory, an emerging, very-high-end niche in which one veteran vendor, Teradata, has been pre-eminent."

Kobielus also saw a challenge to Netezza.

"Like that vendor's appliance, the Oracle Database Machine offloads SQL query processing and large-table scans to an intelligent storage layer," he wrote. "Whereas Netezza uses a technique that involves field-programmable gate arrays, Oracle has leveraged its 11g technology to parallelize query/scan execution to a massively parallel pool of Exadata storage cells."

Oracle's storage layer is transparent to applications, meaning they don't need to be rewritten to see performance gains, he wrote. That said, Oracle is "just one of several [data warehouse] vendors that have petabyte-scale solutions. It's best not to get all whipped up in a lather by an artfully constructed event-based marketing tease."

In other news from the OpenWorld show:

- Oracle said it is aiming to get the first version of Fusion Applications into the hands of early adopters in 2009. Fusion apps are supposed to combine "best-of-business" capabilities from Oracle's various product lines, which include E-Business Suite, J.D. Edwards, PeopleSoft and Siebel. To date, Oracle has only shown off a handful of Fusion applications, which were oriented around CRM, and the project overall has been dogged by concerns that it is behind schedule.

- The company introduced an application grid that employs technology acquired through its purchase of BEA Systems that can help IT shops respond to spikes in demand for a given application. Application grids eschew the traditional approach that dedicates a piece of hardware to serving a particular application. Instead, the grid format creates a pool of resources that can be provisioned dynamically at runtime.

- Oracle said it is now offering its 11g database, Fusion Middleware and Enterprise Manager products through Amazon Web Services' Elastic Compute Cloud (EC2). The vendor will also let customers use existing software licenses on EC2 at no additional cost.

- Oracle rolled out its Beehive enterprise collaboration platform that joins the existing Oracle Collaboration Suite. Licenses are priced at \$120 per user.

- The company announced Oracle VM 2.1.2 server virtualization software, which includes certification for the vendor's Real Application Clusters technology. ■

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Cisco takes aim at collaboration

Company adds Microsoft, IBM integration and offers SaaS-based mashup tool

BY JIM DUFFY

Cisco sees gold in all of us working together. Last week's collaboration splash is intended to mine what Cisco says is a \$34 billion market for unified communications, cloud conferencing and telepresence. Its refreshed portfolio is designed to help companies accelerate business processes and increase productivity — and to drive home Cisco's point that the network is the nerve center for companywide collaboration.

"It's one of the first proof points Cisco's had around the concept of network-as-a-platform," says Yankee Group analyst Zeus Kerravala on last week's collaboration rollout.

Additions to the Cisco collaboration portfolio include a new release of the company's UC software, a WebEx-enabled product for Web meetings with integrated presence and instant messaging, and TelePresence customer service.

Cisco contends that the network as collaboration platform fosters integration between business applications, communications devices and Web-based tools while letting IT departments maintain their mandates regarding security, policy and compliance. Microsoft comes at it from a software perspective, while IBM touts systems, server and software as the optimal collaboration platform.

Deeper integration with desktops in those IBM and Microsoft environments is one of the features of Cisco's Unified Communications Release 7.0 software. Another is mobility, with additions that help extend collaboration features across workspaces.

Still another is Cisco Mobile Communicator support for devices running on Windows Mobile as well as Symbian and BlackBerry operating systems. Unified Communications 7.0 also scales Cisco Unified Presence to 30,000 users and Cisco Unity to 15,000 users on a single server, Cisco says.

The new WebEx Connect is a software-as-a-service (SaaS) application platform for collaborative business mashups that integrates presence, IM, Web meetings and team spaces with traditional and Web 2.0 business applications.

"It's the first time one of the major UC vendors decided to go to market with an online,

All together now

Key components of Cisco's collaboration lineup:

- **Unified Communications 7.0** — server-based software designed to enable an organization to create adaptive workspaces. Provides business-to-business federation support for Microsoft Office Communications Server and Cisco Unified Communications plug-ins for IBM Lotus Sametime.
- **WebEx Connect** — a software-as-a-service application platform, based on Cisco's \$3.2 billion acquisition of WebEx, for collaborative business mashups that integrate presence, instant messaging, Web meetings and team spaces with traditional and Web 2.0 business applications.
- **TelePresence** — Cisco's life-size, high-definition virtual meeting and conferencing systems for company conference rooms and offices.

SaaS-based offering," Kerravala says. "The idea behind WebEx Connect is to allow developers to be able to access a lot of the UC elements from the cloud. It's the cloud version of UC."

Cisco's WebEx Connect includes a number of standard applications including enterprise IM, team spaces, document management, calendaring and discussions that can be combined with third-party widgets to enable companies to work from a single workspace. It lets administrators control enterprise policy, security and compliance for secure inter-company collaboration, Cisco says.

Cisco WebEx Connect also works with enterprise messaging systems to provide integrated communication capabilities within a collaborative mashup. One user is impressed with its ease of use.

"They've kept it simple," says John Kingsley at AECOM, a provider of professional services to a range of vertical markets. "There's a lot of complexity underneath but when you can get something in front of them that doesn't intimidate [users], it's refreshing."

AECOM has operations globally, and the company plans aggressive growth both organically and through acquisition. As a SaaS platform, WebEx Connect has enabled the company to pull people together faster.

"Getting people to be able to plug in together quickly and easily and not have to worry about ordering equipment and making sure they're on the same network, and firewalls, is giving me the opportunity to expedite the ability for people globally to collaborate," Kingsley says. "It lets us link out to some of the internal SharePoint stuff that we've built for our internal users, but [also] go out and work with our clients as well without having to give them access behind our firewall."

Messaging, however, is an area where the

company can improve, according to another user.

"They need to have a way of having the [Unified Personal Communicator] client be able to talk to all IMs — not just one — all those different clients," says Mike DeDecker, voice network engineer at Activision. "So a user doesn't have to have four or five different clients working at his desktop just to communicate with the rest of the world."

DeDecker says Activision, though, can benefit from UC 7.0's standard local route groups feature, which he says reduces the number and automates the establishment of dialing rules between two sites.

Kerravala expects WebEx Connect to compete with hosted versions of Microsoft's Live Meeting and Avaya's OnDemand VoIP offering.

The TelePresence component is called Cisco TelePresence Expert on Demand. It integrates Cisco TelePresence into the contact center for in-branch customer service and the ability to summon expertise directly from a Cisco TelePresence meeting.

It enables customers to connect with subject-matter experts for in-person customer and point-of-sale service. Users can summon expert assistance directly in a Cisco TelePresence meeting or use a dedicated Cisco TelePresence endpoint and get face-to-face assistance.

For example, a retail bank could provide "in-person" services to bank customers in every location via Cisco TelePresence, giving organizations the ability to scale resources or expertise, irrespective of geographic location.

Cisco Unified Communications System Release 7.0 and Cisco TelePresence Expert on Demand are available. WebEx Connect is available as a desktop and Web-based client; support for mobile clients is scheduled to be available in early 2009. ■

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Symantec Corporation

Symantec Endpoint Protection 11.0

vs. McAfee Total Protection for Endpoint

Performance Impact on Microsoft Office Usage



Test Summary

Premise: In today's threat-laden environment, complete client protection is paramount to maintaining productivity. It is also important to provide that endpoint protection while using a minimum of system resources and minimizing any impact on users. Long wait times caused by security program processing can reduce the productivity of system users and generally degrade their Quality of Experience. Symantec has made optimizing client performance a focus of its development efforts.

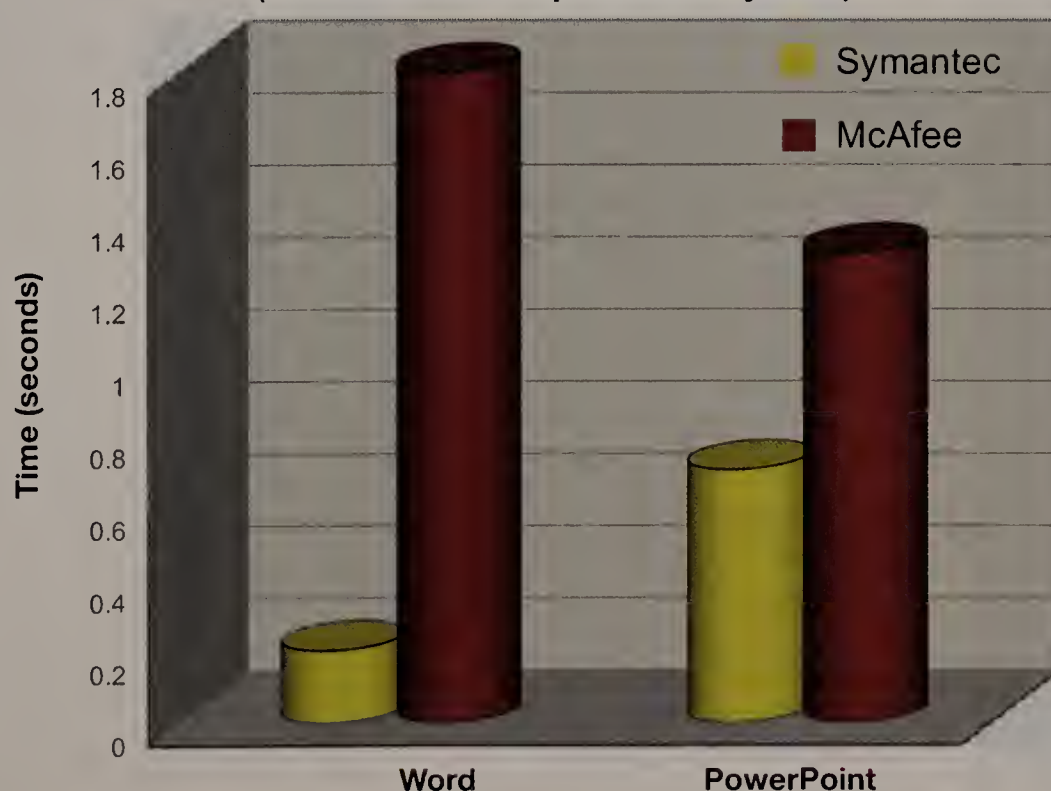
Symantec Corporation commissioned The Tolly Group to evaluate the impact of two Enterprise-class endpoint security offerings on host client performance: Symantec Endpoint Protection 11.0 compared with McAfee Total Protection for Endpoint. The Tolly Group installed Symantec Endpoint Protection 11.0 which provides anti-virus, anti-spyware and host intrusion prevention functionality in a single agent against the corresponding products in the McAfee Total Protection for Endpoint Bundle (See Figure 4).

The Tolly Group benchmarked file "open" and "save/close" times, as well as memory usage on an unprotected Microsoft Windows Vista SP1 system and compared these with execution times on the protected systems. Tests were conducted in July 2008.

Test Highlights

- ▶ Symantec Endpoint Protection has a more positive impact on user productivity than the McAfee offering
- ▶ Symantec Endpoint Protection provides faster save/close time for key Microsoft Office documents, Word and PowerPoint than the McAfee offering
- ▶ Symantec Endpoint Protection consumes less overall memory than the McAfee offering when executing "save/close" functions for Microsoft Office documents

Microsoft Office 2007/ Vista File "Open" Times
(Increase Over Unprotected System)



Source: The Tolly Group, July 2008

Figure 1

Executive Summary

Symantec's Endpoint Protection 11.0 provides faster processing for common functions such as opening and saving Word and PowerPoint files. This capability can improve the productivity and Quality of Experience for users.

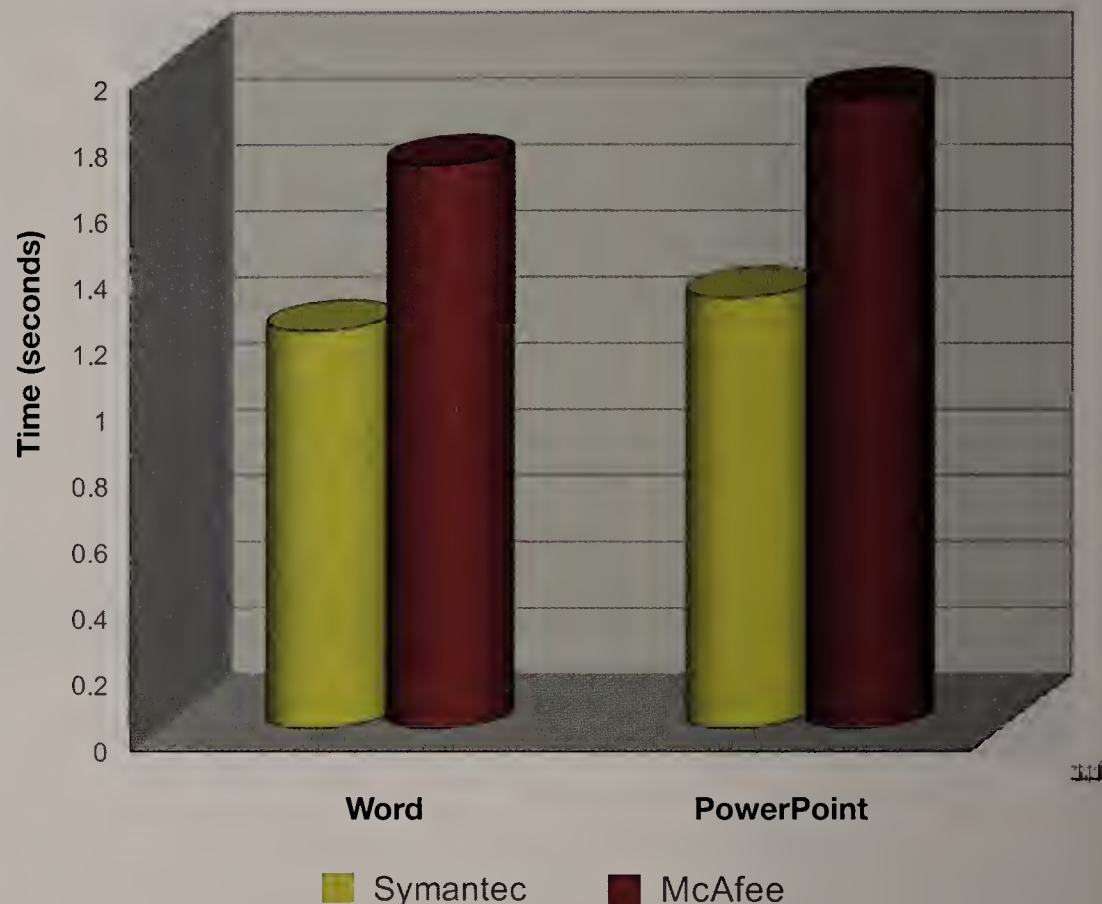
Endpoint Security solutions are designed to inspect and scan every file that is opened or written to the hard drive. The anti-virus engine scans the file and compares it to its repository of known viruses to ensure that no malicious content is embedded and that no harmful scripts are present in the file. This operation has a non-trivial impact on the performance of applications such as Microsoft Word and PowerPoint.

Symantec Endpoint Protection 11.0 consistently demonstrated faster "open" and "save/ close" times for Word and PowerPoint documents than McAfee Total Protection for Endpoint while using less overall memory.

Tolly Group engineers used a Microsoft Vista operating system with no protection client installed in order to gather benchmark data for certain file operations.

Engineers then tested these same operations on the baseline system with only the Symantec solution installed

**Microsoft Office 2007/Vista File "Save/Close" Times
(Increase Over Unprotected System)**



Source: The Tolly Group, July 2008

Figure 2

Summary of Test Results

Function	Baseline	Symantec	McAfee	% less impact than McAfee
Elapsed time (seconds)/ Maximum memory (MB)				
MS Word	2.5	2.7	4.3	88.9%
5MB Open	36.0	26.7	40	333.3%
5MB Close	10.5	11.7	12.2	29%
	24.3	17.0	31.7	198%
MS Power-Point	3.8	4.5	5.1	46%
20MB Open	34.3	41.3	50.3	56.3%
20MB Close	9.4	10.7	11.3	31%
	39.0	42	51.7	76.4%

Source: The Tolly Group, July 2008

Figure 3

and then with only the McAfee solutions installed.

RESULTS

MICROSOFT OFFICE FILE "OPEN"

Tolly Group tests show that Microsoft Word was able to open a 5MB document in 2.7 seconds on a system with Symantec Endpoint Protection 11.0 installed, requiring only 0.20 seconds longer than the baseline system. On a system with McAfee Total Protection for Endpoint installed, the same operation took 4.2 seconds. Microsoft Word opened the file on the baseline OS in 2.5 seconds. (See Figures 1 and 3).

MICROSOFT POWERPOINT

Testing also included measuring the time to open a 20MB Microsoft Power Point document. On the baseline system it took 3.8 seconds to open the 20MB presentation. Symantec added only 0.7 seconds to the operation. The system with McAfee installed took, 5.1 seconds to open the PowerPoint document, demonstrating that McAfee's impact was 48% higher than Symantec's. (See Figures 1 and 3).

MICROSOFT OFFICE "SAVE/CLOSE TIME"

Tolly Group engineers measured the amount of time required to save and close a modified (i.e., using "Save as" to save an unmodified file under a new name.) 5MB word file. The system with the Symantec

client took only 1.2 seconds longer than the baseline system. The system with McAfee installed required 0.5 seconds longer than Symantec and 1.7 seconds longer than the baseline OS.

This same test was conducted for a 20MB Microsoft Power Point document. Powerpoint saved the presentation in 10.7 seconds on a system protected by Symantec, compared to 11.3 seconds on a system protected by McAfee. The McAfee products added 1.9 seconds to this operation.

TEST SETUP & METHODOLOGY

Tolly Group engineers tested Symantec Endpoint Protection 11.0 MR3 and McAfee Total Protection for Endpoint. Note: McAfee assigns product numbers to individual products within the suite (See Figure 4).

As each solution is geared to the Enterprise user, each installation consisted of multiple security modules. The default set was installed, but only those that dealt with file access were exercised in this test.

All tests were conducted on the same client. Network connectivity was only required to "deliver" the endpoint software to the client under test.

The client machine ran Microsoft Vista Business (32-bit) SP1 on machine outfitted with an Intel Pentium D, 2.8-GHz processor, 1GB of RAM. The system was outfitted with a single Western Digital model WD800 drive which is an 80GB SATA hard drive. The client was a "clean" system without any viruses or malware placed on it.

Symantec Corporation
Endpoint Protection 11.0



Performance Impact of Enterprise Endpoint Security on Windows Vista

Product Specifications

Vendor-supplied information not necessarily verified by The Tolly Group

Symantec
Endpoint Protection 11.0

Benefits:

- Symantec Endpoint Protection combines Symantec AntiVirus with advanced threat prevention to deliver unmatched defense against malware for laptops, desktops and servers. It seamlessly integrates essential security technologies in a single agent and management console, increasing protection and helping lower total cost of ownership
- Improved end-user Quality-of Experience through efficient use of system resources

Features:

- Seamlessly integrates essential technologies such as antivirus, anti-spyware, firewall, intrusion prevention, device and application control
- Requires only a single agent that is managed by a single management console
- Provides unmatched endpoint protection from the market leader in endpoint security
- Enables instant NAC upgrade without additional software deployment for each endpoint
- Optimizes client footprint and resource utilization to fit all business environments

Symantec Corporation

20330 Stevens Creek Blvd.
Cupertino, CA 95014
URL: www.symantec.com

Product Components	
Symantec Endpoint Protection	Version 11.0
McAfee Total Protection for Endpoint Suite	Virus Scan Enterprise 8.5 for Windows
	Host Intrusion Prevention 7.0 for Windows
	AntiSpyware Enterprise 8.5 for Windows
	Site Advisor Enterprise 1.5

Source: The Tolly Group, July 2008 Figure 4

The Tolly Group is a leading global provider of third-party validation services for vendors of IT products, components and services.



The company is based in Boca Raton, FL and can be reached by phone at (561) 391-5610, or via the Internet at:
Web: <http://www.tolly.com>,
E-mail: sales@tolly.com

Fair Testing Charter™ Interaction with Competitors

As the products are designed to be "user installable" without support, The Tolly Group did not deem it necessary to contact the competing vendor.



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Biometrics help locate terrorists

BY ELLEN MESSMER

TAMPA, FLA. — A biometrics “jumpkit” is helping American soldiers in Iraq to identify dangerous persons by immediately comparing detainees’ fingerprints against an Army database in the United States, using a satellite link for speedy analysis.

“When we roll with a target we need quick, rapid identification of who we have,” said Konrad Trautman, director of intelligence at the U.S. Special Operations Command, describing how the biometrics kits can help zero in on gangs making improvised explosive devices (IED) in Iraq.

These terrorist groups leave their fingerprints everywhere, including on scraps of already exploded devices, said Trautman, who described the process at the Biometric Consortium Conference held last week in Tampa.

The U.S. military in Iraq over the last two years has amassed a large database of fingerprints and photos that can be instantly accessed using the biometrics jumpkit. Soldiers submit a Web-based inquiry with a detainee’s fingerprint scan to the Army’s Biometrics Fusion Center via a small Inmarsat satellite antenna link that’s part of the kit, and in about 15 minutes can find out if the fingerprint matches a prior entry.

In situations that involve high-value targets, interrogations, or door-to-door searches, “for us to come in with knowledge that there has been bomb-making sets the tone for the discussion,” Trautman said.

Soldiers have made about 28,000 biometric submissions over the past two years, resulting in 1,722 positive matches for individuals linked to IEDs, which has greatly helped reduce the bomb-making violence in Iraq, Trautman said.

“If I find a fingerprint off a mortar fin that landed, I can probably figure out who did it,” said Lt. Col. Thomas Pratt from the U.S. Central Command. Entire groups of bomb-makers are being identified through biometrics, Pratt said.

In addition to collecting fingerprints, the military is storing iris and DNA captures from the most dangerous individuals and using that information to link people to terrorist events.

But it hasn’t always worked that way, said U.S. military officials at the conference.

“Eight years ago we were writing a number across the forehead of a detainee with a pen,” said Myra Gray, director of the Defense Department’s Biometrics Task Force, which centrally organizes the military’s efforts to use biometrics technologies. “Terrorists have no borders. For us to be effective, we have to break down barriers and have effective data sharing between agencies.”

She said the use of biometrics has directly led to 379 of the most dangerous terrorists being “taken off the street.”

The Defense Department’s arduous collec-



A look inside a biometrics “jumpkit” used by American soldiers to identify dangerous persons.

tion of biometrics from Iraqi detainees is being carried out under an agreement with the Iraqi government, but military officials acknowledge the collection methods “are more permissive than what you’d find in this country,” Pratt said.

Biometrics era

The soldier’s biometrics jumpkits are just one example of how the U.S. government has embraced the science of collecting fingerprint, face, iris and other biometrics to identify individuals since the Sept. 11, 2001, terrorist attacks.

“We’ve always had the issue of identity fraud. It took 9/11 as a catalyst for Congress to say we need something better,” said Robert Mocny, director of the Department of Homeland Security’s US-VISIT program, which requires foreign visitors coming to the United States to submit to an electronic fingerprint scan to be checked against a watch database.

Although the US-VISIT biometrics program initially faced controversy, it now successfully checks 23 million prints per year, Mocny said. Other countries, including Canada, Japan, Peru and Argentina, have either launched or will soon launch similar visitor biometrics systems.

The next step Congress wants is “some kind of biometrics exit,” said Mocny, to ensure those who entered the United States as visitors actually left the country.

DHS would like airlines to assist in the biometrics collection process at departure gates, for example, but Mocny acknowledged, “The airlines aren’t happy about it.”

Another large-scale government biometrics project just getting ramped up is the Transportation Workers Identification Credential (TWIC) program. This joint project initiated by the Coast Guard and the Transportation Security Administration (TSA) requires workers at

port facilities, vessels, drilling rigs and docks to carry a card-based credential with their digital fingerprints stored on it to prove their identity in on-the-spot fingerprint checks using mobile card readers.

The credential costs more than \$100.

“We have an enrollment now of 500,000,” said Maurine Fanguy, TWIC program director at TSA. “We’ve been able to take this out to the worker.” TSA estimates about 1.2 million workers will get a TWIC card, with a mandate this should be completed by next April.

TWIC field tests will soon commence in five locations, including with Watermark Cruises in Annapolis, Md., and Magnolia Marine in Vicksburg, Miss.

Some equipment has had to be modified to the environment: Dock workers tend to have much bigger hands than average, for example. “We’re encountering people with hands so big, they can palm the standard reader,” Fanguy said. “Fingerprints like you’ve never seen in your life.”

The TSA also wants airport operators and airlines to migrate from the physical access-control methods they now use to government-approved biometrics-based access methods. Carter Morris, senior vice president at the American Association of Airport Executives, said 40 airports have formed the “Biometric Airport Security Identification Consortium” to speak with a common voice to the government on the topic.

Morris said the airport industry and airport operators want a very clear idea of what to invest in, hopefully based on a “standards-based framework,” so that the biometric verification of aviation workers is interoperable.

Deploying biometrics is not easy, and the General Services Administration (GSA) is finding that out in its effort to outfit government employees and contractors with the Personal Identity Verification (PIV) card required under the Homeland Security Presidential Directive 12 (HSPD-12) signed by President Bush in August 2004.

HSPD-12 called into creation the PIV smart card with digital credentials and a two-fingerprint biometric, provided upon completion of a background and criminal check.

Civilian federal agencies — and increasingly the Defense Department, which has long had its own Common Access Card — are looking at PIV to be the credential for physical and logical access. But David Temoshok, director of identity policy and management at GSA, acknowledged “interoperability is very hard across 19 systems. I won’t say it’s impossible, but it will be very hard to do.”

At GSA, which has issued about 100,000 PIV cards, the card still isn’t being used for physical or logical access at this point, Temoshok said. ■

This is not a Mac vs. PC column



NET INSIDER
Scott Bradner

It's been more than a year and a half since Microsoft introduced Vista to the general public. It's also long after Microsoft started making it hard to buy a computer with any Microsoft operating system other than Vista, at least for non-business purchasers.

Microsoft has sold a lot of copies of Vista; in May it reported it had sold 140 million. This statistic, along with the data points that 2007 was a record year for Microsoft and that 2007 Windows revenue was about \$17 billion, should be seen as good news. Yet the press hardly ever

has a positive word to say about Vista and its adoption.

Some observers might attribute the press response to some sort of Apple bias — a bias that is most obvious whenever Steve Jobs is about to put on some public show. But any such bias — if it exists — does not seem to be the primary reason for the negative comments.

At this point I need to say that I have a carefully cultivated ignorance of Windows Vista. As regular readers know well, I have been using Macs since 1983. I used Macs along with Unix machines for some of that time, but it's been Macs exclusively since Tenon Intersystems released MachTen for OS 9 (BSD Unix as a Mac application). As far as I'm concerned, I have the best of both worlds — the Mac interface and one of the better Unix systems around. Nevertheless, my pro-Mac bias is not why I'm writing this column.

What did get me to write this column is Microsoft's recent advertising effort. So far, there has been huge publicity, first about Microsoft hiring Jerry Seinfeld (see www.nwdocfinder.com/6824), apparently to humanize the company, then dumping him after two ads and starting a new campaign that shows people identifying themselves as the computers they use. The latter seems to me to be the result of an ad person on

hallucinogens watching Apple's PC vs. Mac ads.

This is not the first time Microsoft has thought that throwing money at advertising agencies and TV networks would somehow make its software better. Microsoft announced an advertising blitz of "hundreds of millions of dollars" when Vista was first introduced. Maybe those ads helped push Vista (I remember thinking at the time that the ads were quite forgettable), but they were not aimed at me.

The Seinfeld ads were also not aimed at me — I'm not quite sure just whom they were aimed at. The first ad was unforgettable (unfortunately — it is hard to put the image out of my mind of Bill Gates wagging his tush). The only result of the ads that I could see was the blitz of negative comments about them from about every corner (for example, *Newsweek* said "hiring a TV star from the 1990s to fix Vista's reputation only adds to the impression that Microsoft is in a time warp"). Interesting factoid: One of the Apple "think different" ads, which seem to be lurking in the subconscious minds of the Microsoft ad people, also featured Seinfeld.

The main thing I've seen resulting from the new ads is a rekindling of press comments that paint Vista as a failure, at least in the business world. Naturally, any discussion of this type does devolve into a Mac vs. PC rant fest.

Maybe Vista is great, but it seems to me that an ad campaign whose tagline is "life without walls" is not an ideal way to sell something called Windows: One does not need windows if one does not have walls.

Disclaimer: I am not privy to any Harvard decisions on Windows versions or advertising for them, so the above observations are mine, not the university's.

Bradner is Harvard University's technology security officer. He can be reached at sob@sobco.com.

Calculating the cost of communicating



EYE ON THE CARRIERS
Johna Till Johnson

At a recent trade show, I happened to mention that some of my more forward-looking clients have created "communications calculators" that enable them to predict — with a high degree of accuracy — what the communications costs will be for moving or adding employees. Let's say a business unit owner wants to shift 5,000 employees from site A to site B — how will that affect communications costs?

Not surprisingly, the first question I got was: "How do I build one of those?" Here's what I suggest:

Start by investing in products that enable you to accurately identify application flows through the network — by type, site and user. Track this over time to determine long-term trends, so you're aware of what percentage of the WAN is being consumed by which applications.

While you're gathering that data, make sure you're investing in asset management technology. Be aware of which hardware and software assets you've got, what's being used and what's idle, and by whom it's being used. Count everything: licensing fees for unified communications applications, hard and soft IP and TDM phones, and all data networking gear.

Also audit your WAN service contracts. Try to arrive at a consistent dollars-per-megabit-per-second metric for different traffic and service classes. In other words, if you're still using plain old telephone service, convert your voice traffic from cents per minute to dollars per megabit. Rank your MPLS, private-line, and legacy frame/ATM data traffic the same way (you may need multiple ratings if you're paying for differen-

tial class of service). And don't forget wireless — it's an increasingly important component of your overall communications spend.

Figure out how many people you have supporting your users, and what they're doing. Separate the folks who are doing architecture and planning from direct support and break-fix — the former don't increase based on the number of users, but the latter do. A good ratio to have is users-per-support staffer.

Take all this information and start crafting "user profiles." You shouldn't need more than a handful, but you should be able to categorize users fairly simply based on the following: application portfolio, hardware configuration, LAN connectivity, WAN connectivity, support requirements, geographic location, mobility requirements, telecommuting requirements, and backup and recovery needs.

The user profile is essentially a map between users' job functions and their technical requirements. The idea here is to be able to fairly straightforwardly build out definitions such as "a back-office administrative worker has the following requirements" and "a developer/engineer has the following requirements."

Next, build out your model. Watch for step-function increases — places where adding one more user necessitates upgrading a pipe from T-1 to fractional T-3, or adding a new server or staffer. At the end of this exercise, you should be able to estimate the communications cost of each employee quite well.

Finally, loop in accounting. To perfect your model, compare your estimated and actual costs, and investigate every discrepancy. Just a few iterations will clarify where your model needs beefing up.

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Integrating SaaS and legacy apps

Following these steps can help simplify the job of bridging environments

BY LOU FOX

While the task of integrating on-premises systems with software-as-a-service, platform-as-a-service or cloud-computing services might seem daunting, the process is simpler than you might imagine.

The secret is focusing on why the business will benefit from integration, what problem integration will solve and how to keep the costs in line. Here are the key steps in an integration project.

Step 1 — Define the business process. Work with the business to define the processes from the user perspective that require integration so you can figure out the answers to the following questions:

- How are employees using the on-demand system? Will it be the main portal or used for particular tasks?

- Is integration driven by the need to leverage a shared business process? For example, some organizations must vet all accounts before they are officially added to the account master file. If users are constantly creating accounts in a system such as Salesforce.com, the organization may have a strong need for integration.

- Will integration involve connecting the on-demand application to a larger workflow that extends across many departments and systems, such as an order-to-cash and fulfillment process?

- Will the project require active or passive integration? Active integration requires data to be moved between systems at the specific request of the user. Passive integration moves data at scheduled times, without any users triggering the process. Active integration requires different technology than passive integration, and the efforts can vary widely in cost and time.

Step 2 — Calculate the value. Determine the value of the integration to the business, not by building a complex ROI model but by simply outlining such basics as:

- How will the integration improve adoption of the business process?

- How will automating the process reduce

operating costs?

- How will it drive higher sales or profit margin, and by how much?

- How quickly do users need this and why?
- What is the cost of not integrating? In wasted hours? In incomplete data? Dollars?

Step 3 — Determine technical requirements. Now that you've examined the business issues, it's time to think about technical solutions. The first thing to remember is that,

By taking this careful approach to determine the best model for integrating on-premises systems with hosted solutions, you'll be sure to reap the benefits such solutions provide.

for the most part, on-demand systems have APIs that are programming-language and tool agnostic (SOAP, REST, XML over HTTP and so on). Confirm this with the vendor, ask yourself the following questions and move on to Step 4.

- How are you integrating your premises-based systems today?

- Do you have an ETL, ESB, EAI tool or have you been thinking about getting one?

- Are you a custom development house?

- Are there software tools available for integrating this on-demand application rather than building and supporting it from scratch?

Step 4 — Risk assessment. Now that you have confirmed that this on-demand system has a rich API, examine the following areas:

- Look at your staff's skill set and ask yourself: Are you more likely to have a successful project using your current tools and staff, or by bringing in new staff and software? And yes, new software means new staff, or at least retraining your existing staff.

- A great way to reduce risk is to iterate instead of delivering all the functionality at once.

- If you are evaluating an integration solution, is the company selling that solution

viable? After all, vendors in the integration market tend to be either dot-coms or companies that have been dropping in value over the past eight years. (Note: Over the past eight years such standards as SOAP, REST and XML have been driving down the complexity in integration and the need for big middleware products.)

Step 5 — Solution selection. Now that you have a few options on the table, it's time to judge them and pick out the best one for the problem at hand. The best way to do that is by asking the following:

- What is the total cost of ownership (TCO) of each solution? Remember to factor in these issues:

Custom code requires staff to maintain and enhance. Your environment will change regularly. Don't assume it will be static.

You may think you are an exception to this rule. You are not.

Many products are similar to custom code. If you are writing if/then for loops, for example, you are coding and you need to have people in-house who are trained in this tool and are able to maintain it and enhance it. Or you need to calculate the costs of a professional-services provider to code and support your integration effort.

And, while it may seem obvious, don't forget about the cost of the tool.

- Is the TCO low enough to justify an ROI case?

- Will this solution get the job done quickly enough to keep the business happy? Will it be easy enough to change as the business changes?

- Does the initiative require a project that will be measured in months or years?

- What is the success rate for integrating with this technology, using the software tools that you are choosing?

- What effort will it take to track down issues? For example, say your integration project involves a large workflow that extends across systems, departments and so on. If an order becomes stuck somewhere along the line, what effort will it take to figure out where it got stuck? If an error happens, will you know before the business complains?

By taking this careful approach to determine the best model for integrating on-premises systems with hosted solutions, you'll be sure to reap the benefits such solutions provide.

Fox is CTO for Bluewolf and can be reached at Louf@bluewolf.com.

Got great ideas?

■ *Network World* is looking for great ideas for future Tech Updates. If you've got one, and want to contribute it to a future issue, contact Editor in Chief John Dix (jdix@nww.com)

LIU'S VIEW.

Mastering DNS has always been challenging — some would say it's as much art as science. And while I'm thrilled that DNS plays a key role in essentially all network applications, I'm concerned by current trends. We're now seeing more frequent attacks against DNS infrastructure. Recently, for example, we saw a spate of what are referred to as "DNS amplification" attacks in which open recursive name servers are used as amplifiers to swamp targets on the Internet. Turns out that name servers are terrific amplifiers — you can get an amplification factor of nearly 100x. These attacks have raised awareness of the vulnerability of Internet name servers, which is possibly the only positive result.

Dealing with DNS issues is becoming a full time job for organizations. My company, Infoblox, provides leading edge products to help IT managers better handle their DNS network management challenges.

When I need an answer fast, I go to a source I trust — DNSstuff.com. Comprehensive troubleshooting and problem solving tools in one place. That's powerful.

Think all DNS tools are the same?
Think again.

Cricket Liu, DNS guru, author & VP of Architecture, Infoblox

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WHEN GOOD ISN'T GOOD ENOUGH.



GEARHEAD

Mark Gibbs

More Chrome details

Last week I discussed Google's Chrome Web browser and I got some great feedback and some less so. On the great side was an old colleague from Novell who said it was "by far the most interesting and informed ... commentary I have read on Chrome."

On the "less so" side was "Alex" who posted in the Gearhead forum "Your analysis is very basic, but fairly good." Thanks. I think.

Alex added: "Chrome, at least for the first year of its life, is mainly intended for home users." Sorry Alex, but Google's goal is much bigger than targeting the home consumer market. It is trying to build a platform for running applications delivered by the Web that relegates the operating system to a supporting role (Microsoft should be nervous).

You can eventually run software as sophisticated as today's personal productivity applications by downloading them through your browser with your data stored in the "cloud", the prevailing user computing model that has been in place for thirty years is no more. Paradigm shift is what Google is trying to achieve.

The deep technology that underlies Chrome that I didn't have space to go into in my "very basic" discussion is what will drive this new model. For example, Chrome uses multiple processes (one for each tab) instead of multiple threads, which provides better performance and memory management, and should prevent lockups and complete browser crashes because of the contents of a tab crashing. Chrome also has a JavaScript engine that is supposed to be significantly faster than the one in Firefox and much faster than Internet Explorer.

As to overall performance, there have been some interesting, albeit preliminary, tests. For example, a posting titled "Burning Chrome,

Screaming Firefox, Lame IE" on the Open-Xchange blog concluded: "Google Chrome does not quite match the performance of Firefox 3, but in numerous tasks performed faster than Windows Explorer 7 ... Google has delivered with Chrome a technically up-to-date Web browser, which performs nicely with demanding AJAX applications".

If you want more information about what's under the Chrome hood, check out Google's Chrome comic book and an interesting Wired article on the history of Chrome.

Don't dismiss Chrome and don't classify it as another consumer-oriented browser. If Google can pull the browser rabbit out of the beta release hat, then much of what we do with PCs could change significantly. At the very least it could lead to new and improved architectures in other browsers.

Speaking of browsers, a reader who had just switched to Firefox 3 wrote that when Firefox was running "every couple of minutes there was a flurry of hard drive activity, lasting maybe 10 or 15 seconds ... I didn't see any Internet activity taking place, so I'm not sure what was happening, but I didn't like the idea that my drive might be scanned periodically without my knowledge or permission."

Interesting. I queried my friends on the-list-that-shall-be-nameless and a suggestion was made that as Firefox 3 switched from using .ini and .xml files for storing data to using SQLite, this might explain the disk access as housekeeping.

The absence of Internet activity may not be correct though. Both browsers and their myriad extensions are always calling back to their motherships, which will probably also trigger disk accesses. Mozilla recently published an article about Firefox making "unrequested" connections that is worth reading.

Gibbs can be reached at gearhead@gibbs.com.



Keith Shaw

COOLTOOLS

Sonos and Logitech's rocking systems

The scoop: Sonos Multi-Room Music System, Bundle 150, by Sonos, about \$1,150.

What it is: The latest version of the Sonos music system includes updated Wi-Fi connectivity (it uses 802.11n as its wireless bases, but still uses proprietary wireless mesh technology to connect multiple players together) and updated software.

Since I last tried the system, Sonos has also made deals with several music services to let users listen to Rhapsody, Pandora, Napster and Sirius Satellite Radio through the system. The Bundle 150 includes two ZonePlayer devices (the ZP90 and ZP120) and a ZoneController. Users only have to connect one ZonePlayer (or a \$99, sold separately ZoneBridge) to a network router, and the rest of the players work wirelessly over the Sonos mesh. Once connected, the players can play Internet radio, or music stored on a PC (after installing Sonos Desktop software) or a network-attached storage (NAS) drive.

Why it's cool: The system is designed for users who want music played all throughout the house, and simultaneously — if you could be in two rooms at the same time, you'd notice that the music was playing in perfect sync. Or you could play one song in one room and a second in another room. The Sonos Controller provides easy access to music stored locally or over the Internet.

Some caveats: The price may turn away some users, especially if they're not committed to the multi-room music concept. If you just want networked music in one room, less expensive options are certainly available

(see next review).

Grade: ★★★★★ (out of five).

The scoop: Squeezebox Boom Network Music System, by Logitech, about \$300.

What it is: The latest device in Logitech's Squeezebox line of network music players, the Boom includes a 30-watt digital amplifier and speakers, and the ability to connect to a home network via Ethernet or 802.11g wireless. Once connected to a network, the Boom can access music stored on a PC hard drive or over the Internet (through the SqueezeNetwork online music service).

Why it's cool: The Boom offers a nice all-in-one system (interface, 30-watt digital amplifier and speakers) that can still access tons of music over a home network. The portability of the Boom lets you place it in separate rooms, and Logitech says that multiple Boom devices can play different songs or synchronized together to create a multiroom system (we only received one Boom, so we couldn't test this claim). The system has an easy-to-use remote to access music, and a line-in port lets you connect an iPod or other music player. The access to lots of online music services is very impressive.

Some caveats: Setting up an account for SqueezeNetwork to access all of the digital music services is a hassle. The system can't access music stored on a networked hard drive, so to listen to locally stored music, you either need to leave your PC powered on, or upload your music to SqueezeNetwork.

Grade: ★★★★★

Shaw can be reached at kshaw@nww.com.



The Sonos Multi-Room Music System Bundle 150

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NETWORKWORLD®

Virtual winner: VMware's ESX KOs a roughly built Hyper-V package

VMware wins, due to the manageability, stability that come with maturity

BY TOM HENDERSON AND BRENDAN ALLEN,
NETWORK WORLD LAB ALLIANCE

When the dust settled in the lab after two long months of testing Microsoft's Hyper-V and VMware's ESX for performance, compatibility, management and security, it all boiled down to two issues: experience and religion.

VMware ESX took home our Clear Choice award because it showed depth and maturity in our performance and qualitative analyses of the hypervisor and the first tier of management tools offered by each vendor. On the other hand, Hyper-V's components were very Windows focused and very rough.

Performance, as reported earlier this month, heavily favored ESX, although Hyper-V edged it out in a few contests (see www.nwdocfinder.com/6721.)

On the compatibility front, Hyper-V's early lead in the number of supported hardware platforms (based on the widespread support for Windows Server 2008 itself) is completely offset by a dearth of support for non-Windows virtual-machine (VM) operating systems. VMware's supported-hardware list is shorter, but its support of a comparatively vast number of operating systems made us cheer (see "The issue of virtual compatibility," page 32).

In addition, VMware's VirtualCenter management platform is mature and straightforward in the ways administrators can use it to control resident VMs on a VMware host. VMware's Virtual Infrastructure Client (VIC) is the administrative user interface to the VirtualCenter platform.

Microsoft's System Center-Virtual Machine Manager (SC-VMM) 2008 (we tested a very late beta version which Microsoft guaranteed was feature complete) works with very strong ties to the underlying Active Directory and has an interface that fits right into Microsoft's System Center scheme, so administrators won't have to work hard to understand how it works. That said, things from standard management tasks — viewing simple settings for a VM host, for example — to much-touted advanced features — such as the ability to migrate ESX VMs to Hyper-V — caused SC-VMM to crash repeatedly during testing.

Regarding these hypervisor environments' security options, we found that both vendors need to beef up their authentication protection methods and provide a designated, secure store for VM images.

Either virtualization platform can be dressed up with add-ins that cover everything from eye-catching GUIs to fast tracking for priority applications, to special-interest support for favored hardware platforms. These options could be combined effectively to be all things to all people, but we had to select the components we tested to get an even comparison.

Our line in the sand was to select the basic bundle, which was composed of the hypervisor itself and the management tools needed to build, execute, monitor and maintain a production VM infrastructure.

Our test combinations were Microsoft's Hyper-V using SC-VMM 2008 vs. VMware's ESX Infrastructure Foundation package. We added just one option to the VMware foundation: VirtualCenter for ESX, which, like SC-VMM, is a starter kit for managing multiple virtualized host platforms. These additional software elements make the two hypervisor platforms equivalent.

Although we only rarely test nonproduction software, we chose to use SC-VMM beta (Build 0991.1) in testing Hyper-V because it is close to public release and Microsoft contended it was feature complete and on target to be ready for a September release. That said, Microsoft has since missed that release target date and is now saying it won't even

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NETRESULTS

Product	Hyper-V RTM 1.0 with beta version of SC-VMM 2008	VMware ESX 3.5.1 with VirtualCenter
Vendor	Microsoft www.microsoft.com	VMware www.vmware.com
Price	Microsoft Hyper-V ships with Windows 2008 Enterprise edition, which starts at \$1,500. Stand-alone version of SC-VMM expected to be \$675.	VMware ESX Infrastructure 3.5 (Foundation edition with VirtualCenter) \$2,000.
Pro	Simple basic installation; extensive hardware platform support.	Better OS compatibility; VMotion live-migration tool increases flexibility; faster performer overall with good SMP kernel support.
Cons	Limited OS compatibility; management tools are late and barely working; performed generally more slowly than ESX in testing.	Hardware-compatibility list is shorter than Microsoft's; weak passwords raise security issues.
Score	3.5	4.25

SCORECARD

Action	Hyper-V	VMware ESX
Setup, compatibility and migration (25%)	3.0	4.5
Administration and management (25%)	3.5	4.0
Performance* (25%)	3.5	4.5
Security, monitoring and event management (25%)	3.00	4.00
Total		4.25

Scoring key: 5: Exceptional; 4: Very good; 3: Average; 2: Below average; 1: Subpar or not available.

* Performance results published separately (www.nwdocfinder.com/6721).

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RTM for another 30 days. We'll likely take another look at the shipping code and compare it with what we found in this initial round of testing. What we found was that SC-VMM crashed frequently, needed to be patched heavily, and required a lot of configuration limitations that aren't supposed to be in the final production product.

The tools of the VM management trade

Because virtualization is usually part of a server-consolidation project, rapid VM-instance generation, movement, monitoring and trouble assessment can be critical to the virtual deployment because a single server usually represents many production processes.

We built dual Hyper-V and ESX servers to gauge how each hypervisor design handled hosting both new and consolidated virtualized operating-system and application instances. We assessed the system's flexibility in creating new VM guests, tested the primary tools that do the heavy lifting when discrete physical servers are moved to virtual servers (a process known as P2V), and reviewed how the tools provided helped in ongoing management of all guests.

For ongoing monitoring capabilities, we took into account the depth of the characteristics each product could track and how those were communicated in the form of logs and reports. We also assessed the flexibility of the VM security choices.

VM management tools need to perform at least four basic functions: managing the drivers to be used, updated or deleted for the corresponding hardware connections to the hypervisor; allocating and building VM spaces for guests; monitoring ongoing characteristics (CPU, disk space, I/O) and alarming events; and loading, unloading and backing up discrete VMs.

Microsoft's SC-VMM assists in controlling Hyper-V guests from remote (nonvirtual-server host) locations. Hyper-V's GUI rides on Windows and connects to the SC-VMM 2008 administrative engine running on the same machine as Microsoft's Active Directory Domain Controller and a version of Microsoft SQL Server. SC-VMM installs an agent on each Hyper-V VM it manages.

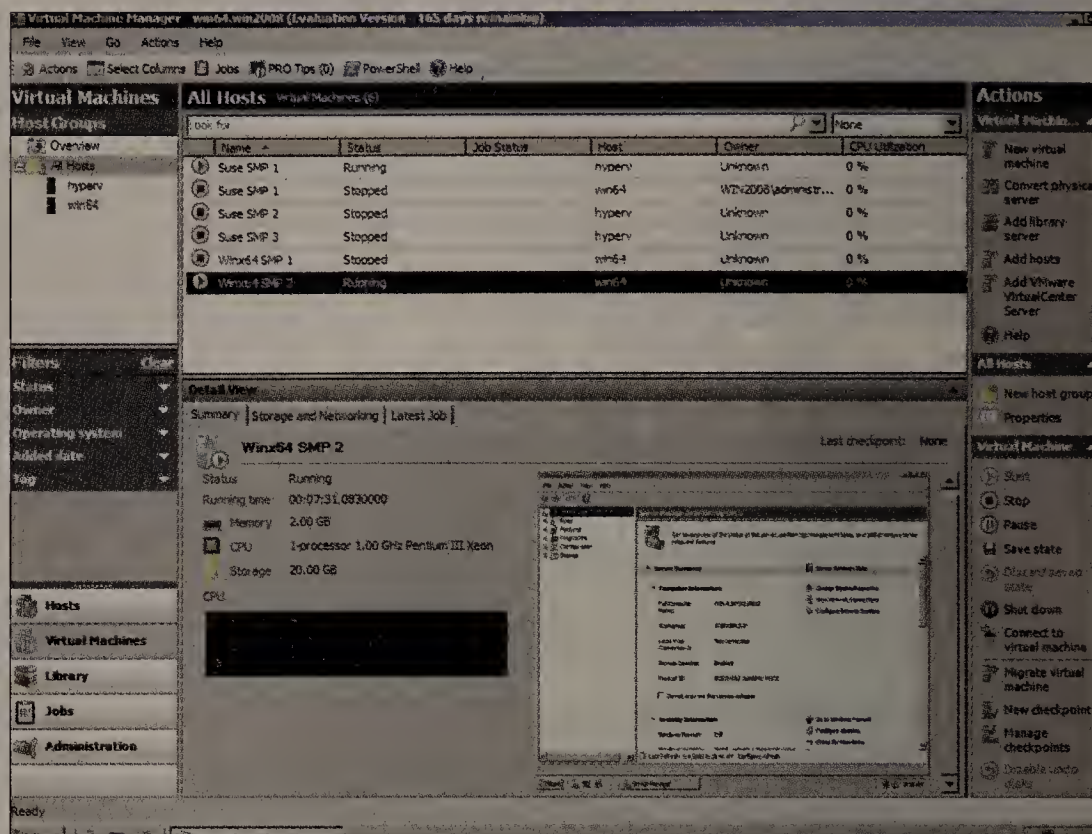
VMware's ESX and its hosted VMs are monitored and manipulated by VirtualCenter, which runs as a background Windows application on the virtualized server or another Windows machine connected to it. VirtualCenter requires that SQL Server Express Edition be installed for it to function properly as a management data store and that an agent be installed on each ESX server.

Both SC-VMM and VirtualCenter perform their management missions to varying degrees of success.

Microsoft, as was mentioned several times in our performance discussion, offers a free Linux Interface Connector (LinuxIC) kit, which has three components (CPU/memory, I/O drivers and keyboard/mouse) to speed Novell SUSE Linux Enterprise Server (SLES) versions 10.1 and 10.2 VMs.

Like LinuxIC, an optional ESX add-in called VMTools adds network and block-memory drivers and faster graphics-translation speed to VMware ESX guest operating systems (there are versions for both Linux and Windows) if desired.

When Hyper-V is controlled by SC-VMM, the administrator can turn a VM guest on or off remotely or have it shut down gracefully. Also, through Active Directory, administrators are supposed to be able to manage which users can access the VMs. An administrator can, of course, limit what users can do: for example, start and stop machines, pause and resume, make checkpoints, remove machines, create new VMs, and be a local admin for them. The feature wasn't camera ready



Microsoft, with its System Center Virtual Machine Manager 2008 software, provides a centralized console for viewing performance parameters of all Hyper-V host servers on the network.

when we tested it: It crashed the SC-VMM application repeatedly.

SC-VMM also drives the importation of VM images and is supposed to be able to import ESX VMs to Hyper-V, but that didn't work in our SC-VMM beta code. On that same cross-platform note, the same function in ESX — importation of Hyper-V images — also didn't work. No points were awarded either vendor for cannibalizing a competitor's images.

VMware's VirtualCenter can do many of the things mentioned above (turn machines on and off, shut down, reset). We were also able to create template images to be used as a base to create images later, or clone a VM (while it's turned off). Also, we were able to assign permissions to each VM, enabling different users and groups (via Active Directory/Local Users) to access that VM or group of VMs.

Another thing you can do with VirtualCenter is set up what's called a resource pool, which allows you to divide resources more easily among multiple VMs. For example, let's say you have six VMs. You would like two to use 60% of the resources on that system and four to use 40%. You can create two resource pools and assign the VMs to one. This way, you don't need to worry about assigning resources to individual VMs.

Building a virtual host

We used several steps after installation to prepare virtual-guest slots on our Hyper-V and ESX hosts. We then populated them to emulate server migration and consolidation processes. Once either hypervisor was installed, we could generate guest instances that served as holding spots for installable operating-system and application instances on physical servers that we wanted to migrate to our host servers.

Both Hyper-V and ESX allowed us to install guest instances without the aid of the SC-VMM and VirtualCenter tools, respectively, then install a premade VM instance or an operating system from a CD or DVD, or install from a network source or share. The additional management tools can be helpful in this process, serving as a user interface to the hypervisor. Both tools eased common VM-instance management tasks, such as duplicating, creating, copying, and allocating and reallocating resources. For moving existing operating-system and application pairings to a virtual host, the hypervisors have a similar procedure that captures a server instance and imports it into a virt-

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Line up network problems.



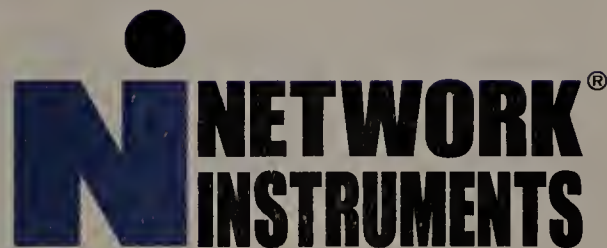
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ual guest slot that we prepared.

This process of copying a current physical server to a target server is known as cloning. There are two primary P2V cloning methods that both hypervisors support: migrating from a disk image and cloning from a live production server.

Unfortunately, Microsoft's P2V process couldn't be tested because this portion of the beta application crashed despite lots of patching, intricate settings tweaks and calls to advanced technical support. It's not ready yet.

VMware's P2V application is an optional extra called VMware Converter; when we tested it, it worked well in most cases as long as the hard-disk controller was supported. It mainly worked best with Windows, where we could produce live clones from Windows XP and Windows Server 2003 images. To cold-clone Linux and Windows Server 2008 VMs required some extra setup steps after it was copied.

Images of working VMs then can be used as the basis of replicas for other VM guests. The images, however, are in known formats and can be mounted as file systems for manipulating the content files and folders. Hyper-V uses a cross-Windows file format called VHD, and ESX uses a published system called VMDK.

Some organizations use virtualized images for distribution, and images may need to be customized to make the image unique (a general Windows requirement for identification) or to load specific software combinations as a payload for a targeted distribution of the virtu-

alized physical hardware instances to other locations.

With both products, we found that mounting and editing images can be simple but also runs the security risks we talk about in detail below.

Migrating images

Migrating VMs from one server host to another is done for a variety of reasons, ranging from load balancing to application aggregation.

For our direct comparisons here, migrations revolve around taking snapshots of existing working VM guests, then moving these images to new target-server hypervisor hosts.

VMware offers an optional live-migration tool called VMotion. Our experience with VMotion is that it can move images within seconds from one server hypervisor to another. Microsoft recently announced that a similar service for Hyper-V won't be available until 2010, a serious deficiency if we were to include this in our direct comparison.

By using snapshots under Hyper-V, we were able to capture live system-state data on either Windows Server 2008 or Novell's SLES 10.2 VMs.

It took a loaded machine seconds for the snapshot to complete. The snapshot feature can be used to roll back or restore a server's use state, but there are implications. For example, as transactional states of applications are frozen, the server becomes unavailable for a short period of time; users thus may find their applications performing badly because they cannot access the server while the snapshot is being taken. Further, an image rendered from a system-state snapshot and subsequently used as an instance on another machine might not be supported in operating-system and application licensing. Microsoft recently changed its pol-

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The issue of virtual compatibility

MS has the hardware support, but VMware supports more operating systems

Both hypervisors we tested have requirements for the hardware they can run on and the virtual machines they can support. They both require a supported hardware platform with a 64-bit virtualization-enabled Intel or Advanced Micro Devices CPU. Sufficient memory is needed to support the guests that will inhabit the virtualized atmosphere.

VMware's ESX displaces less than half a gigabyte of memory for its own use. Hyper-V must live on (some will argue adjacent to) an edition of Microsoft Windows Server 2008 (the choice of edition decides the number of guests and requisite costs of hosting) but takes up a nominal amount of extra operating-system space. Microsoft's recommended base memory requirement is 2GB — but includes room for Hyper-V and a Windows Server 2008 base instance.

Hardware choices can be complex because both server and peripheral cards (generally network interface cards, and a disk/host bus adapters infrastructure) need to be supported by the hypervisors as well. Hyper-V runs over any platform that suits Windows Server 2008 editions — a very long list. The Windows Server site lists approved hardware and software and outlines how to use Hyper-V on top of Windows Server 2008 running in 64-bit mode atop a V- or VT-enabled CPU.

In contrast, VMware's ESX compatibility list includes many servers from the top-tier equipment vendors — IBM, Dell and HP — but overall the list is far shorter than that for Hyper-V.

General, white-box, 64-bit AMD and Intel machines are not supported officially by either virtualization platform. If they are equipped with the right virtualized processors and BIOSs, they might work, but support for the problems found in these hosts might not be forthcoming.

Knowing the infrastructure and administrative ins and outs of Windows Server 2008 editions is the ticket to a simple and fast

installation of Hyper-V because it runs as a server role snap-in. No initial Hyper-V configuration is required if Windows Server 2008 is installed already. By contrast, VMware's ESX installs like a typical Linux distribution but with a graphical front end. Both hypervisors were easy to install on our platforms, which were known to be compatible with their product families.

The list of operating systems that can be migrated to each platform stands squarely in favor of VMware's ESX.

ESX's advantage comes in part from the fact that it supports many versions of Windows operating systems — more than Hyper-V, in fact — ranging from user operating systems (Windows XP and Vista Professional in x86 or x64 versions) to Windows Server operating-system flavors (from Windows 2000 through Windows 2003 x86 or x64 versions to the latest cuts of Windows Server 2008 Data Center and High Performance Cluster versions). It also supports Windows NT.

The other reason for ESX's edge here is that Hyper-V — as Microsoft certifies — supports only one version of Linux, Novell's SUSE Linux Enterprise (SLES) 10 Service Pack 1 or 2, in x86 and x64 versions. However, only one virtual processor is supported for each virtualized instance of SLES 10 SP 1 or 2. Microsoft's Connectix acquisition, which brought Microsoft Virtual Server to market, initially supported a vastly wider variety of guests. For Hyper-V support of Linux, Microsoft's relationship with Novell has Microsoft buying hundreds of thousands of SUSE Linux support kits for Microsoft's (and their customers') use.

VMware's ESX, in contrast, supports a long list of other operating systems. Those include Red Hat Enterprise Linux in numerous editions, several editions of SUSE Linux and Ubuntu Linux, FreeBSD, and Sun's Solaris 10. It also supports Novell's NetWare.

— TOM HENDERSON AND BRENDAN ALLEN

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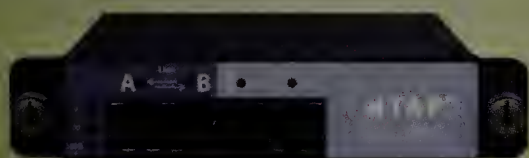
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icy to allow VM instances to be migrated (for various versions of Windows) from one host to another, but licensing prohibits spontaneous movements of VM instances, whatever their state. That state also may represent application or file states that when reinstantiated require maintenance. Transaction states may have to be verified as well.

VMware's Virtualized Consolidated Backup (VCB), which is included in the VMware Infrastructure Foundation edition we tested, adds full and incremental backup of guest hosts to disk or tape. The file system is quieted during backup to keep things synchronized, possibly, and temporarily, removing VM guest operating systems and applications from availability through the process. VMware says VCB also can be integrated with CommVault Systems, EMC, HP, Symantec, IBM/Tivoli and other backup applications, but we did not test that level of integration.

VMware's ESX uses two capture systems to pull VM images, one that develops a VM image from a live, running server and one that takes a shut-down server's disk and captures the state of the disk. We captured several operating systems (see "How we did it" at www.nwdocfind.com/6722) and found that this is a simple process that works well and consistently.

Monitoring capabilities

VMs are allocated shared resources when they're born, and then must live within the confines of those settings. When VM instances use their maximum allocation or are allowed constantly to plug into shared (oversubscribed) resources, administrators need to know so that the help desk doesn't light up with complaints of apparent application inadequacy.

We used SC-VMM's instance-monitoring capabilities to watch CPU, memory and disk use (how much and how frequently) to gauge its capabilities vs. VIC's ability to monitor VM-performance attributes. To make a long discussion short, they're nearly the same: Both monitor important VM characteristics. VIC comes out on top when it comes to watching whether exceeding thresholds triggers an alarm. Thresholds aren't monitored inside SC-VMM because this requires the use of other products in the Systems Center family. VIC, however, allowed us to set thresholds in such areas as CPU use, where zero use meant that perhaps an application had crashed, and hitting a ceiling meant the application was peaking.

Using VIC, we set alarms based on conditions we needed to know about, such as when CPU, memory, network or disk use went above or below a certain threshold or when the machine state changed or there was no VM heartbeat. There are three colors for severity: green, yellow and red. Green means everything is fine, yellow is a warning and red is trouble. Once an alarm was triggered, it was recorded in a log file. We could set how often it would trigger again either by frequency (in seconds) or tolerance (a certain percentage). We also could set an action to follow when a trigger was set off. These actions included sending an e-mail, sending a notification trap, running a script, powering a VM on or off, suspending a VM and resetting a VM.

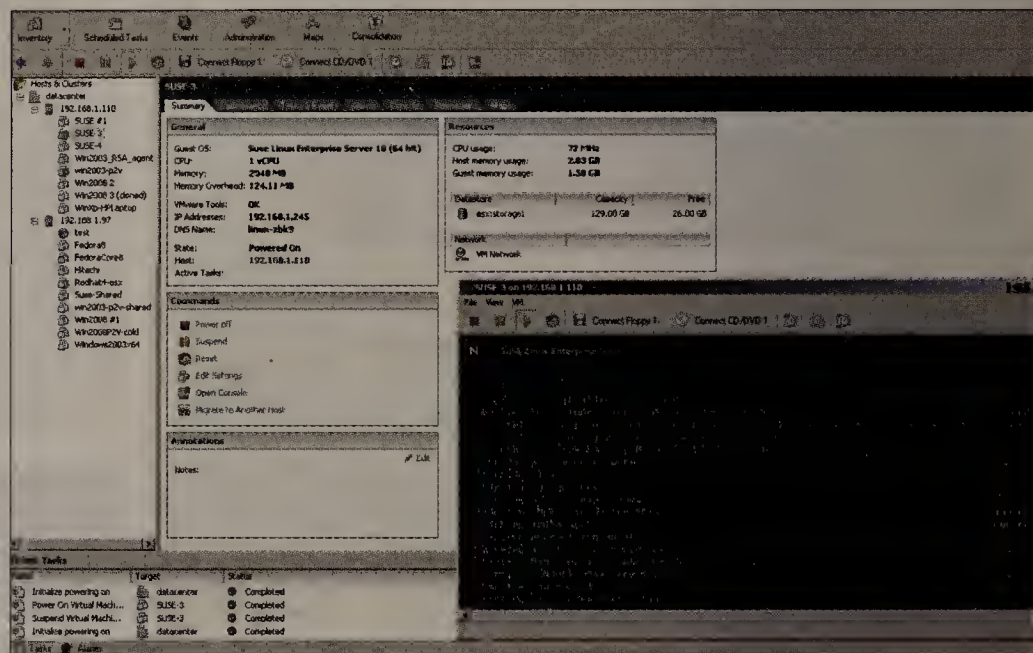
While there are no alarm or trigger options built into SC-VMM, there is a limited set of options that allowed us to start specific VMs as the server booted up. When the server shut down, Hyper-V saved the state of VMs and turned them off.

Security could use some beef

We had security issues with both hypervisors in several areas. The first big issue is the fact that the images used to build virtual guests aren't serialized or authenticated in either platform. Should the image storage area be accessible, only file-system time, date and modification metadata will be able to indicate that a VM image has been used or worse, tampered with.

Because both hypervisors lack a native repository, images must be stored in an area chosen by the administrator. They ideally would be authenticated through external methods, such as MD5 hashing, rudimentary checksums or other ways to validate image contents. VMware does embed an ID number into the image contents for enumeration purposes, but not for authentication. Because ESX and Hyper-V produce images in formats that are easily mountable file systems, hackers with even rudimentary skills and file-system access can tamper with images. This begs for at least a minimal image repository setup that records authentication hashes or data to be included even in a basic bundle.

We also found that ESX doesn't police password strength in its strictly Windows-based VirtualCenter. If the passwords are weak, access can be garnered through dictionary password attacks.



VMware's Infrastructure Client component — backed by the VirtualCenter management engine — allowed us during testing to easily build and monitor VM guests across multiple server hosts.

When managed through SC-VMM, Hyper-V is accessed through default or defined Active Directory passwords, which are by default strong and can be made stronger with additional authentication methods.

Third-party authentication devices are virtually ignored. Controlled access to both hypervisors is lacking, although the Windows Server 2008 that runs underneath Hyper-V has some authentication mechanisms in place. Still, there's no direct authentication for either Hyper-V or ESX.

VMware added a basic firewall to surround itself and its VMs by default when we installed it. The Windows Firewall components built into Windows Server 2008 ostensibly protect Hyper-V VM guests, but we didn't assault either product to see if we could crack them. We could fingerprint the VM guests if ports were open to do so, and therein lies an unexplored attack vector.

Summary

VMware's long-standing virtual history has given the ESX product ample time to mature to a very stable, usable product.

The "dribbleware" nature of the release of virtualization products from Microsoft — with Hyper-V, the LinuxC kit and SC-VMM 2008 arriving six months, eight months and 10 months after Windows Server 2008 editions hit the streets — certainly won't help with the rapid deployment of Hyper-V in environments where it will earn its chops. Microsoft's development power is obvious, but the devil will be in the technical details as Microsoft plays catch-up in the explosive virtualization marketplace.

Henderson and Allen are researchers for ExtremeLabs, of Indianapolis. Contact them at kitchen-sink@extremelabs.com.

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Info cards

continued from page 12

Addressing Endpoint References and Identity specification from IBM and Microsoft, and the Open Source Identity Systems (OSIS) Feature Tests from Identity Commons.

The IML group said in a statement it would "assure the portability of Information Cards content by defining a standard method of transferring collections of Information Cards between Identity Selectors." The group says Information Cards are relevant to Web 2.0, consumer and corporate intranet applications.

"Having things be real standards created by internationally recognized standards bodies is important for adoption in certain sectors such as government and telcos," says Mike Jones, director of identity partnerships for Microsoft and the author of the ISIP. Jones says the expectation is that other organizations, such as the ITU, would recommend the use of the IML's eventual standard.

"This is not coming out as a surprise," Jones says. "This has been building on the fact that most of the major system vendors have been working together to achieve interoperability among Information Cards software for about two years. This is coming at a logical point."

The OSIS group has held six interoperability events since May 2007 that have included various vendors.

In June, Equifax, Google, Microsoft, Novell, Oracle and PayPal set up the Information Card Foundation to push Information Cards as an open, interoperable user-centric identity system that could stretch across intranets and the Internet. Deutsche Telecom and Intel later joined as board members.

There are now about 40 separate implementations of different parts of the Information Cards software, Jones says. That list includes about six identity-selector interfaces available that let users select and present Information Cards.

Microsoft's CardSpace is supported in Windows XP and Vista. Last year, Novell introduced its DigitalMe Information Card selector as part of its Bandit Project. Developer Chuck Mortimer has created a Java-based identity-card selector that runs in a browser, and developer Kevin Miller has created an extension for Firefox to support CardSpace. IBM has an implementation called the Eclipse Higgins Identity Framework and supports CardSpace in its Tivoli Federated Identity Manager.

Web-site operators will have to build support for Information Card-based technologies into their Web sites, which basically would be code that asks users to sign in using a CardSpace ID or other similar identity-selector technology.

Vendors and developers have been free to build Information Cards-based identity selectors since 2006 when Microsoft released its Open Specification Promise, which gives developers access, without need for licenses or fear of legal action, to many of Microsoft's Web-services protocols. ■

UTM

continued from page 1

Nickle, the IT director for Underwriters Safety and Claims in Louisville, Ken., which uses an Astaro Security Gateway UTM. It replaces two devices — a Cisco PIX firewall and a Novell BorderManager proxy — and provides functions the company lacked before, namely, intrusion protection, gateway antivirus and SSL VPN.

Initially, Nickle was skeptical that the device could perform all its functions well, but he says it does, and generates an executive report daily that he finds valuable for its snapshot of the previous day's activity, application by application. It reports concurrent traffic, CPU and memory use, the number of packets filtered and top users.

"It answers 95% of the questions I might have about the network," Nickle says. For greater detail, he can drill down to the activity of a particular IP address or the top categories of blocked URLs. Before, he had to dump logs from BorderManager and sort them. The Astaro reporting makes it easier to find data he needs to comply voluntarily with Statement on Auditing Standards 70 requirements, which demonstrate to outside parties that companies follow accepted auditing procedures.

Consolidating functions on a single device has its upside, but not all users are satisfied that UTMs provide the best protection. Cedarville University, a 3,000-student school in Ohio, uses paired SonicWall E7500 UTMs; still, other gear that duplicates some of their functions is desirable, says Nathan Hay, Cedarville's network engineer.

In addition to firewalling the network, the UTM gear performs intrusion prevention, gateway, antispam screening and URL filtering, Hay says.

Hay chooses to double up the URL filtering with a St. Bernard Software iPrism Web-filtering appliance that offers more than the Web filtering on the UTM, such as logging and built-in reports, he says. "I get more complete features with the purpose-built Web filter," he says.

Because URL filtering is available on the UTM and doesn't overtax the machine, however, Hay uses it with the theory that one filter might catch something the other misses.

Hay recommends making sure the UTM is the right size. Initially the school had a smaller SonicWall Pro 5060 that bogged down so Hay turned off URL filtering and the intrusion-prevention system (IPS), he says. With the larger device processing the IPS and antivirus screening, it runs at 30% of capacity or less. "The 7500 has lots of horsepower and we wanted it to grow with us," he adds.

Tift Medical Center in Tifton, Ga., uses a WatchGuard Technologies UTM for its firewall capabilities and gateway antivirus screening, but would like to use more features, such as antispam and e-mail filtering. By focusing on a single device, this would help simplify troubleshooting problems and finding threats, says Alan Lewis, the medical center's network administrator.

"For the most part we are using other things. I'm trying to move more and more to the UTM to simplify and consolidate my network," Lewis says.

Lewis also doubles up some protection, however. For instance, he uses both gateway and desktop antivirus because he doesn't believe the gateway can stop all threats. "Not in a large environment like ours. There's too many ways to get in," he says.

He uses a McAfee e-mail filtering appliance in addition to e-mail protection on the UTM, and relies more on the appliance. "I'm not using [UTM] to the fullest. It's on a low-level setting to catch the obvious things," he says. The specialized device is used to do deeper inspection, he adds.

Lewis says he ultimately would like to use the WatchGuard gear for antispam, antivirus and e-mail filtering to reduce complexity. He has separate security-event-management tools, firewalls and Zix e-mail encryption service for medical businesses. "I've got lots of places to look," when something goes wrong, he says. ■

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BACKSPIN

Mark Gibbs

Palin's e-mail and expert mistakes

When a friend from the Czech Republic brought me a bag of dried wild mushrooms he had collected in his hometown, I added them to an Alfredo sauce and served it with linguine — fantastic. The flavor of the mushrooms was insane!

I suppose I could go looking for mushrooms around here, except for one thing: I'm not stupid. I know nothing about picking wild mushrooms,

and because making a mistake could result in my last gastro-nomic experience, it's something I'll happily leave to the experts. Of course, sometimes experts make mistakes.

Consider Yahoo. The company offers a free e-mail service, and so one might reasonably expect it to be expert in e-mail. But what does expert mean in this case? Well, it means Yahoo designed a solid e-mail service for average users. For average users, the chance of being singled out by bad guys and having your account compromised is very low. Not so for the famous.

Consider the plight of vice presidential candidate Sarah Palin. She had a Yahoo account for her private use, and a miscreant, for reasons that appear to concern political activism, managed to get access.

You'll notice I didn't refer to this account breach as "hacking," for the simple reason that there was no skill involved. All it took to gain entry was to use Yahoo's forgotten password feature and guess the answer to the challenge question, "Where did you meet your husband?"

Figuring out the answer wasn't hard, seeing Palin's life story is easily found on the Internet. Palin, foolishly as it turned out, gave honest answers to all the challenge questions.

Allow me to digress for a moment and note the insane response with which some of the press and analysts have greeted this event. For

example, *PC Magazine* wrote a piece titled "Why the Palin hack could happen again and again," which implies there was something special about the breach. Please! There's nothing special about this event, and we can pretty much guarantee that exactly the same thing has happened many times before without anyone caring.

Let's be clear: Given her high profile, Palin was naïve to ever consider using a consumer e-mail service. You'd think that anyone who wanted to ensure their privacy would be more circumspect about which service to use and how to use it — but there you go: She didn't know better because e-mail is not an area she's expert in.

You might think that Yahoo could have thought through the challenge question method and realized there was a potential problem with users providing honest and therefore guessable or findable answers — but the company is giving away a free service without warranty.

Perhaps Yahoo should advise giving nonsensical answers to the challenge questions, but it didn't and it isn't in any way at fault for not doing so. So, the bottom line is that it's not Palin's fault any more than it is Yahoo's. It's just one of those things.

Now we come to the reaction of some of the IT world. *Network World* ran a poll (www.nwdcfinder.com/6732) asking whether "hacking" Palin's e-mail was wrong. A shocking 36% of respondents agreed that it was justified given the circumstances.

I find that incredible. How can IT professionals show such an incredible lack of ethics to give a thumbs-up to what is a criminal act? You're supposed to understand the issues and be experts! Please tell me your response was just a mistake and that you don't collect mushrooms.

Gibbs dines well in Ventura, Calif. Send your menu to backspin@gibbs.com.



Paul McNamara

NETBUZZ

News, Insights, oddities

Google has gone and redefined 'beta'

The question of why so many Google products are classified "beta" — and classified thus for so long — has knocked around the tech press for some time. No one really seemed to know the answer, however — at least, no one outside of Google.

Last week, the question begged for a concrete answer after someone finally took the time to do a hard count of all those betas.

According to Web monitoring company

Pingdom, almost half of Google's products carry the ubiquitous "beta" tag, including Gmail, which debuted way back in the middle of our nation's last presidential election season, April 2004.

A four-and-a-half-year-old product that's still in beta? What gives?

I had no idea, as noted, but I set about getting an answer after Pingdom determined that 22 of Google's 49 products are in beta, including such stalwarts as Gmail, Google Docs and Google Finance. (Pingdom intentionally left Google Labs out of the mix.)

It turns out that Google doesn't think about or use the word beta the way that most of the rest of us have always done — and still do. We'll dissect that explanation in a moment, but first more about the tally.

"Everyone knows Google is fond of the beta label on its products, but we wanted some actual numbers, so we went through all of Google's products to see how many of them are in beta," Pingdom analyst Peter Alguacil tells me. "It turned out to be a whopping 45%. As far as we know, there is no other company that does this to the extent that Google does."

From Pingdom's blog post: "Some products you can understand why they are in beta, like Knol, Google Alerts, Custom Search, Google Chrome, etc. However, a lot of products that you wouldn't really

expect are still labeled as beta... We're so used to seeing the little 'beta' tag next to the various Google product logos that we almost don't register it anymore. We even had to double-check that Gmail really still was in beta."

So, I asked Google for an explanation. Here's the statement I received, along with my attempt at translation.

"We have very high internal metrics our consumer products have to meet before coming out of beta."

Excellent. Who would expect anything less from Google?

"Our teams continue to work to improve these products and provide users with an even better experience."

As they should.

"We believe beta has a different meaning when applied to applications on the Web, where people expect continual improvements in a product. On the Web, you don't have to wait for the next version to be on the shelf or an update to become available. Improvements are rolled out as they're developed."

So, people expect continual improvement in their Web applications. Gotcha. What's that have to do with them being labeled beta?

"Rather than the packaged, stagnant software of decades past, we're moving to a world of regular updates and constant feature refinement where applications live in the cloud."

Ah, the cloud. They're labeled beta because they live in the cloud? — No.

Allow me to summarize: Google has decided to strip the word "beta" of its traditional meaning, while simultaneously continuing to use it in a traditional manner, which all but assures that no one will understand what they're trying to do.

Either that or their explanation is still in beta.

Send your own explanations to buzz@nww.com.

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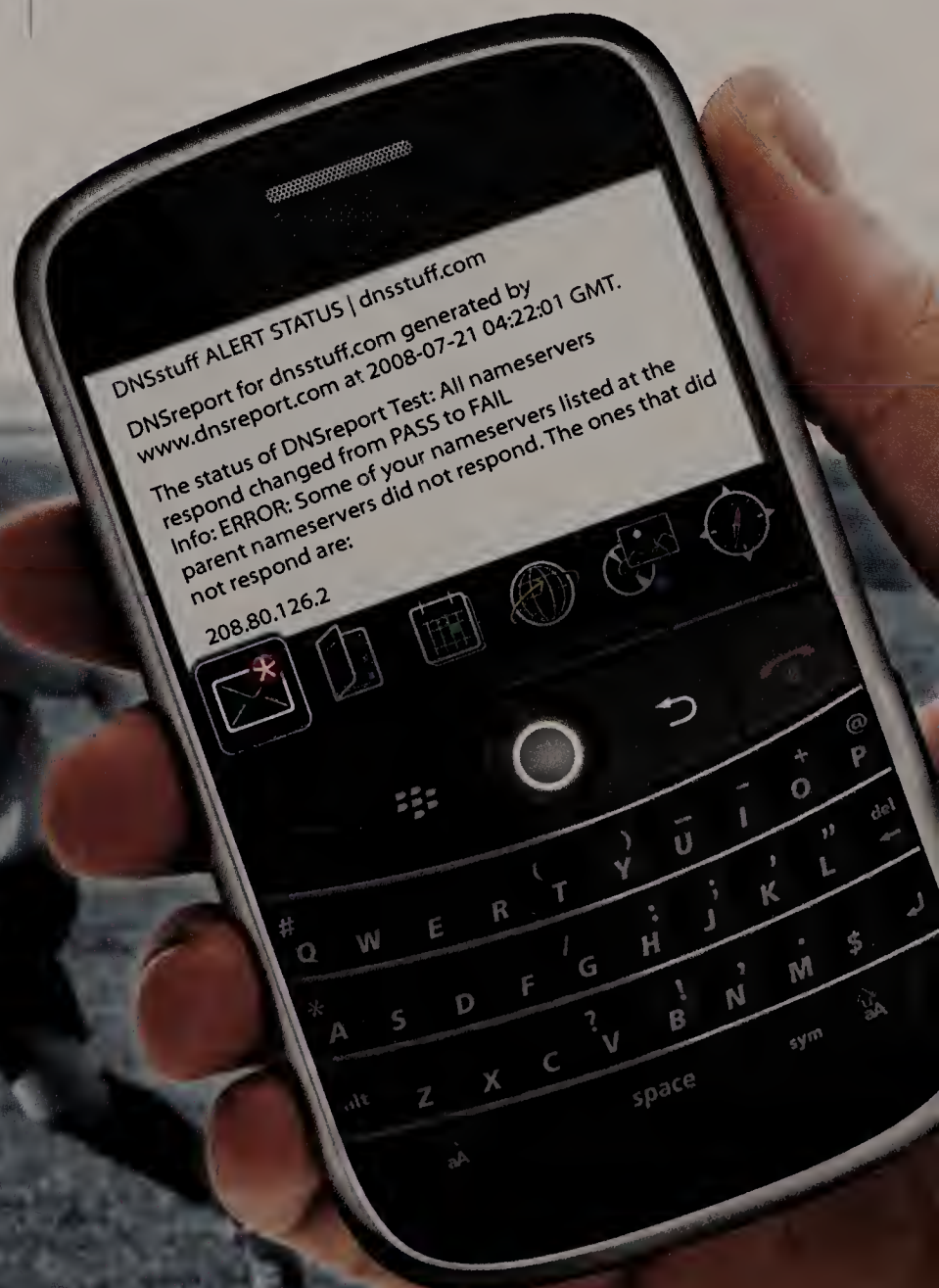
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